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The Limits of Preference-Based Legal Policy

Herbert J. Hovenkamp
University of Pennsylvania Carey Law School

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Herbert J. Hovenkamp

College of Law, University of Iowa

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ARTICLES

THE LIMITS OF PREFERENCE-BASED LEGAL POLICY

*Herbert Hovenkamp**

I. INTRODUCTION

America's political institutions are built on the principle that individual preferences are central to the formation of policy. The two most important institutions in our system, democracy and the market, make individual preference decisive in the formation of policy and the allocation of resources. Without acknowledgment of preference, democracy and the market as we know them could not exist.

American legal traditions have always reflected the centrality of preference in policy determination. In private law, the importance of preference is reflected mainly in the development and persistence of common-law rules, which are intended to facilitate private transactions over legal entitlements. In constitutional law, the centrality of preference is reflected in the high position we assign to voting and other forms of governmental participation.

Two sub-disciplines within legal study have also come to reflect the importance of preference in our governmental system. The first is law and economics, which applies the tools of neoclassical economics to the analysis of legal rules.[1] Under neoclassical economics, the only human needs or wishes taken into account are those expressed through "revealed preference," or utility maximization, where "utility" is understood as the individual's rank ordering of preferences. As a result, neoclassical law and economics bases its analysis of legal rules on the assumption that the only policy values that can be counted are those which reflect individual preference in some way that can be observed and measured. Law and economics generally accepts preferences at face value and identifies policies as either "efficient" or "inefficient" by determining the extent to which those policies express the preferences of people affected by the policy.

The second sub-discipline is the theory of public choice, which also applies economic theory, but this time to the behavior of voting,

* Ben V. & Dorothy Willie Professor, University of Iowa College of Law.

1 *See, e.g.*, RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW (4th ed. 1992) [hereinafter POSNER, ECONOMIC ANALYSIS].

or political, markets.[2] The model of public choice assumes that voters vote their preferences, or that elected representatives behave in a way that will maximize their chances for re-election or for some other enhancement of their position. Legislation, agency rules, and even judicial decisions are best understood as the outcome of bargaining among various persons in a public market, where each participant acts to maximize his or her own utility.

Both the theory of law and economics and the theory of public choice claim superiority over alternative disciplines, such as sociology or some kinds of psychology, which offer policy recommendations based, not on people's preferences, but rather on *objective* judgments about what the observer thinks is good for someone else. Indeed, neoclassical economics, which forms the foundation for both law and economics and public choice theory, generally regards objective welfare judgments as illegitimate or—that most pejorative of scientific terms—"normative."

Markets, whether economic or political, are places where people assert their preferences, weigh them against the preferences of others, and (in the optimistic case) reach mutually satisfactory social arrangements. Assumptions about preference have enabled neoclassical economics and public choice theory to describe both private and public markets by means of mathematical models that have great elegance and rhetorical power. These models can be used to prove things such as the proposition that perfectly competitive private markets, where people assert their preferences by their willingness to pay, are Pareto efficient. This is another way of saying that, by at least one standard of measurement, they give maximum consideration to the aggregate of people's preferences.[3] Similarly, sophisticated mathematical models can show that public voting markets, where every participant's preference is regarded as equal to everyone else's, have no efficient equilibrium and thus cannot be proven to express the aggregation of individual preferences in any rational way.[4]

The principal feature of all these arguments is that they begin with the proposition that preferences, as revealed by the market at hand, are positive, or observed. As a result, they are subject to scientific description. By contrast, objective welfare judgments are one person's assessment of what is good for another, made without observation of the other's asserted preference. These judgments are some-

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[2] *See* DANIEL A. FARBER & PHILIP P. FRICKEY, LAW AND PUBLIC CHOICE (1991); Herbert Hovenkamp, *Legislation, Well-Being and Public Choice*, 57 U. CHI. L. REV. 63 (1990) [hereinafter Hovenkamp, *Legislation*].

[3] *See, e.g.*, KENNETH J. ARROW & FRANK H. HAHN, COMPETITIVE EQUILIBRIUM ANALYSIS (1971); JAMES P. QUIRK & RUBIN SAPOSNIK, INTRODUCTION TO GENERAL EQUILIBRIUM THEORY AND WELFARE ECONOMICS (1968).

[4] *See, e.g.*, KENNETH J. ARROW, SOCIAL CHOICE AND INDIVIDUAL VALUE (2d ed. 1963).

times called "normative," a term which implies that any conclusions to be drawn are unscientific, because they can be neither verified nor falsified, or that they are based on someone's value-laden or ethical notion about what is good for someone else. The implication is that revealed preference is non-normative, value-free, or "positive." To be sure, welfare economists may concede that the fundamental premise that people's preferences are to be given weight is normative, but the task of discovering and measuring preferences is non-normative, or scientific, because it is based on observation.

The notion that people's preferences are entitled to great weight in policy judgments is certainly robust. My thesis here is that the task of discovering and evaluating preferences is so filled with unverifiable assumptions and gaps that it cannot be described in any fashion other than as normative or even speculative. As a result, a complete legal policy can never be based on the policymaker's[5] observations of the preferences of her constituency. A coherent legal policy must supplement revealed preference with a substantial dose of objective welfare judgments. A rational legal policy must therefore be built on a much heavier foundation of objective welfare judgments, with a correspondingly lighter mixture of preference, than either law and economics or public choice theory allows. Indeed, both law and economics and the theory of public choice make egregious systemic errors because they refuse to give adequate weight to objective welfare judgments.

By the same token, many critiques of existing legal policy are misguided, because they rest on too narrow a view of how the legal policymaker determines welfare. The critiques first assume that welfare must be defined by revealed preference and then fault legal policy for being inefficient under that criterion. But throughout history, legal policymakers in even the most liberal of societies have supplemented revealed preference with objective welfare judgments. Any critique that fails to account for such judgments is simply off the mark.

Part I of this Article offers a brief discussion of the concept of preference and its measurement, comparing law and economics with the alternative methodologies of other social sciences. Part II shows the highly historical and contingent nature of our nearly exclusive reliance on revealed preference in making welfare judgments today. Part III argues that any legal policy based on preference alone is incomplete and therefore highly indeterminate, unable to give an adequate accounting of social welfare or of the policies that will maximize it. Part IV illustrates that, rhetoric notwithstanding, definitions of welfare based on considerations *other* than preference are ubiquitous, even within neoclassical law and economics.

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[5] As used here, the term "policymaker" refers to anyone charged with making, or the discretionary interpreting or carrying out of, legislation or other legal rules. This includes, but is not limited to, legislators, judges, executives, and agency officials.

II. Preference and Its Measurement in Democratic Policy

A. The Role of Preference in Law and Economics

Richard A. Posner's influential text, *Economic Analysis*,[6] develops one conception of the relation between law and economics. The economic analysis of law, as Posner describes it, views law from the perspective of the economist. Policies are "efficient" or "inefficient" by economic criteria. If a legal rule incorporates norms that can be justified only historically, or through some social science other than economics, then economic analysis of law has little to say, except perhaps to observe that concerns other than efficiency must have prevailed.[7]

The inquiry for the legal policymaker cannot end at that point. Once she has decided that economic analysis is limited rather than exhaustive, she must also consider what determines those limits and how legal analysis might engage other disciplines to fill out her understanding of a given problem. When the legal policymaker uses law and economics as a tool, she is concerned both about its domain and about the fit between law and economics and other forms of legal analysis. This distinction is subtle, easily exaggerated, and perhaps not always relevant. Nonetheless, the legal policymaker generally begins with the premise that the role of law is not *inherently* defined by economics, philosophy, history, psychology, or any other discipline that is external to the law itself. Within this framework, law and economics should be viewed as a complement to, rather than a competitor of, other conjunctive methodologies, such as law and psychology.

As a first premise, the legal policymaker's ultimate concern is the welfare of his constituency. But "welfare" has no a priori meaning and is subject to numerous definitions[8]—indeed, there are at least as many definitions as there are disciplines in which the term (or its rough social science synonym, "well-being") is used. Economics itself has a highly stylized conception of "welfare," based strictly on individual preference. For purposes of legal policy, the two most important conceptions are Pareto efficiency and potential Pareto, or Kaldor-Hicks, efficiency.[9]

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6 Posner, Economic Analysis, *supra* note 1.

7 For example, Posner concluded that social policies governing the redistribution of wealth cannot be justified within economics. *Id.* at 461.

8 *See infra* text accompanying notes 21-22, 35-38.

9 A state of affairs is Pareto efficient if no alternative state can make one person better off without making at least one person worse off. A *change* in the social regime is thus said to be Pareto *superior* if it benefits at least one person while injuring no one. By contrast, a change is said to be *potential* Pareto superior, or Kaldor-Hicks efficient, if those who gain from the change are able to compensate losers out of their gains and still have something left over.

Some argue that these economic conceptions of welfare exhaust the meaning of that term for the legal policy maker as well.[10] Such arguments may incorporate a normative premise to the effect that economic efficiency is the state's only legitimate concern. Alternatively, one might argue that although welfare theoretically can be measured by alternative devices, they are so imprecise or poorly developed that economics has the clear edge and should be used exclusively.[11] Under the alternative view of law and economics expressed here, economics is an invaluable tool of legal analysis, but other tools are also important. Law must choose its own methodologies for evaluating policy and not necessarily from any single social science discipline.

To be credible, a science must develop internally consistent assumptions and rules. Economics is no exception. But the sciences, particularly the social sciences, have never been so unified that one can say they are controlled by a common set of assumptions. The high point in the drive for unified science was reached more than a half century ago, and ever since the sciences have become increasingly more specialized and isolated.[12] Each of the social sciences, including economics, has traded completeness, or the ability to produce a coherent view of human nature, for methodological strictness.

This strictness carries two implications for the relation between economics and legal policy. First, economics is capable of great rigor within its domain. But second, the domain of economics, as of other social sciences, is limited. The human sciences are alike in some respects but not others. For example, psychology has some assumptions that are superficially the same as those of economics—that people's responses are driven by their preferences, for example. But psychology also indulges some assumptions that are quite different from those of economics. For example, in psychology, the environment causes the formation of preferences, and one can therefore infer the existence of preferences by studying the environment—thus the "objective" welfare judgment. In economics, preferences are generally considered to be "exogenous"—that is, logically prior to everything else that economics considers.[13]

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[10] *E.g.*, RICHARD A. POSNER, THE ECONOMICS OF JUSTICE 49 (1981) [hereinafter POSNER, THE ECONOMICS OF JUSTICE].

[11] *E.g.*, Richard A. Posner, *The Decline of Law as an Autonomous Discipline*, 100 HARV. L. REV. 761, 769 (1987) [hereinafter Posner, *Decline of Law*].

[12] On unification of the sciences, see PERCY W. BRIDGMAN, THE LOGIC OF MODERN PHYSICS (1927); INTERNATIONAL ENCYCLOPEDIA OF UNIFIED SCIENCE (1930); KARL POPPER, THE LOGIC OF SCIENTIFIC DISCOVERY (Karl Popper et al. trans., 1959) (1935). Economics took up the mantle a generation later, after other scientists had largely abandoned the quest, in Milton Friedman, *The Methodology of Positive Economics, in* ESSAYS IN POSITIVE ECONOMICS 3, 4 (1953).

[13] *See infra* text accompanying notes 104-25.

Economic analysis generally proceeds from formal assumptions to technical analysis. But law and economics is an *applied* science. Before one gets to the highly technical apparatus of economics, she must first think through the more fundamental relations between economics and legal institutions. For example, in neoclassical welfare economics, a great deal of creative attention has been given to the mathematics of the utility curve, the relationship between utility and risk aversion, and the like.[14] Much less attention has been given to the more fundamental questions whether "utility information" is the only kind of information we have about human welfare and whether the alternatives are sufficiently reliable that the legal policymaker can use them. Likewise, Arrovian welfare economics[15] is concerned with the mathematics of voting and the use of a democratic process to aggregate individual utility functions into a single social welfare function. But much less attention is paid to the "fit" between the assumptions of Arrow's Theorem and the democratic institutions to which the theorem is commonly applied. In fact, Arrow's Theorem fails to account for any significant part of our legislative or judicial process. Its relevance to the legal policymaker must be correspondingly circumscribed.[16]

The legal policymaker, who is an applied scientist if she is a scientist at all, is obliged to cut through the technical rhetoric of economics and discover what economics offers and where it falls short. Economics has much to offer. The economic case for the efficiency of competitive markets is strong. Market trading is the most efficient way of determining the best final resting point of resources. Likewise, a coherent strategy of regulation would be impossible without the economics of market failure, assuming that economic efficiency is the goal of the regulation at issue. Most importantly, law and economics has greatly extended the concept of the market to disputes over legal entitlements.[17] In the process, it has greatly strengthened the case for private ordering of rights recognized by the law of property and contract.

By contrast, the case for the neoclassical economist's perspective on the distribution of wealth and other entitlements is weak or nonexistent.[18] On issues of distribution, modern economics has relatively little to contribute, and the legal policymaker must look elsewhere. She must make objective welfare judgments based on the assumption

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[14] *E.g.*, JOHN VON NEUMANN & OSKAR MORGENSTERN, THEORY OF GAMES AND ECONOMIC BEHAVIOR 16 (1944).

[15] *See* ARROW, *supra* note 4.

[16] *See* Herbert Hovenkamp, *Arrow's Theorem: Ordinalism and Republican Government*, 75 IOWA L. REV. 949 (1990) [hereinafter Hovenkamp, *Arrow's Theorem*].

[17] *See, e.g.*, Ronald Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960).

[18] *See infra* text accompanying notes 163-77.

that human beings are developing biological and social organisms with certain common needs. This kind of judgment is distinctly outside the methodology of economics, although it is well developed in other social sciences. Further, it forms an essential feature of much of our legal policy, from the goal of "universal service" in public utilities for example to laws subsidizing the provision of food, housing, or education or laws maintaining the National Guard at public expense to combat domestic disaster or disorder.

To be sure, many of those engaged in law and economics are not hostile toward redistribution. But neoclassical economics has not developed suitable tools for determining optimal policies respecting distribution, nor has it shown much inclination to do so. For example, when those engaged in neoclassical law and economics analyze the effects of involuntary wealth transfers (such as taxation plus support payments to the poor), they find it easy to draw conclusions about "efficiency" effects, or the effects on the total wealth of society. But they find it extraordinarily difficult to say anything worthwhile about the effects on well-being produced by the distribution itself.[19] Indeed, these concerns are generally thought to be outside the boundaries of economics. Given standard economic assumptions, markets can be shown to be welfare enhancing, or efficient, while forced wealth transfers generally cannot.

By contrast, other disciplines have shown some progress in developing methodologies for considering distributional questions. Objective welfare judgments look at external manifestations of pain and pleasure in measuring welfare, rather than simply observed market choices. Looking at the same wealth transfer, a psychologist might conclude that the effects on well-being (the psychologist's equivalent of welfare) to a wealthy transferor are small, while those on the impoverished transferee are large.[20] Distributional questions, perhaps more than any others, force the legal policymaker to look beyond economics.

The principal thesis of this Article is both descriptive and normative. Descriptively, it argues that objective welfare judgments are ubiquitous in legal policy and, indeed, even in theoretical and applied economics. Normatively, it argues that objective welfare judgments are no less scientific than preference-based judgments. Further, objective judgments are completely justified by our conception of human beings as evolving biological creatures and necessary for policy making in any society, including a democratic-capitalist society that traditionally has regarded individual preference as decisive. My arguments are based on these premises:

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19 *See infra* text accompanying notes 163-73.

20 Herbert Hovenkamp, *Positivism in Law & Economics*, 78 CAL. L. REV. 815, 843-46 (1990) [hereinafter Hovenkamp, *Positivism*]; *see infra* text accompanying notes 84-96.

First, the state's ultimate concern is with the welfare, or well-being, of its members. This premise is conventional in our legal tradition. Nonetheless, it leads to two conclusions, both of which are subject to dispute. First, in measuring its economic health, the state policymaker must look closely at the welfare of the least wealthy. In a developed nation, increases in the wealth of the rich, or increases in wealth without accounting for its distribution, are poor measures of a nation's economic success when millions remain impoverished. Second, the United States has seriously underinvested in its human capital. Some of the fault for this lack of commitment is the exaggerated willingness of neoclassical economics to let the market take care of such problems.

"Welfare" and "well-being" are not always synonyms. Economists sometimes distinguish "economic welfare" from some broader conception of welfare with which economics is not concerned, but then use the term "welfare" to refer only to the economic conception.[21] Psychologists and other social scientists sometimes use the term "well-being" to distinguish the procedures used for testing human satisfaction in their respective disciplines from the procedures that economists use.[22] "Welfare" is what economists measure; "well-being" is what psychologists or sociologists measure.

In this Article, "well-being" is a fundamentally economic concept, but not the same as the economist's "welfare." The economist's methodology has constrained the meaning of economic welfare to include only the small portion of those elements of human satisfaction that can be purchased with money. That is, the economist measures welfare by looking only at the market choices declared by those who have sufficient resources to make them.

By contrast, as used here, "well-being" refers to those elements of human satisfaction that the state can influence through legal processes. Not all elements of well-being fall into this category. For example, no amount of resources can change a person's racial identity, inherent abilities, or cultural heritage. Further, for political, social, or economic reasons, the state would probably not wish to interfere with many elements of well-being. But these limitations do not narrow the basic definition, which is designed to identify the domain of the state's initial economic concern.

Second, well-being is measured by imperfect tools. Well-being is a subjective feeling of satisfaction or worth that each person experiences for himself. It is *defined* by preference. These feelings cannot be measured by an outside observer, however, and one person's intro-

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21 *See, e.g.*, ARTHUR C. PIGOU, ECONOMICS OF WELFARE 10-14 (2d ed. 1924).

22 *See, e.g.*, INTERPERSONAL COMPARISONS OF WELL-BEING 2-10, 200-54 (Jon Elster & John E. Roemer eds., 1991).

spection is not a reliable indicator of the feelings of others. The policymaker must use surrogates. Different social sciences have developed different surrogates for measuring well-being. Each surrogate is based on normative assumptions that are driven by technical requirements of coherence and measurement within a given discipline. One set of surrogates, such as those used in economics, is not intrinsically better than another set, such as those used in psychology.

Third, the democratic state is obliged to treat its citizens as equals, in at least some minimal sense. Although the state need not guarantee citizens an equal share in society's resources, it must consider the well-being of one citizen to be as important as the well-being of another, even if the two persons do not have the same wealth.

Fourth, the state must make certain policy choices from day to day; it cannot wait until all the evidence is in. Virtually all state policy making consists of actions taken with uncertainty.

Working from these premises, this Article will challenge the view that law must be a slave to methodologies taken from any particular discipline. Those engaged in law, legal history, and jurisprudence often say that law is a "scavenger" which shamelessly picks and chooses ideas from other disciplines.[23] As a result, its claims to being scientific must always depend on the status of science in some other field. Legal "formalism," the grandest attempt to create a law unguided by other disciplines, has been in broad disrepute since the Progressive Era. Only a few practitioners of law and economics have attempted to revive it, by substituting a formalism that derives its principles from neoclassical economics.

The legal policymaker is justified in maintaining methodological independence. This theory is not "formalistic" in the Langdellian sense, because it does not argue that law should ignore the methodologies of other disciplines. On the contrary, making good legal policy requires the use of methodologies developed in other disciplines. But in selecting methodologies, the law is master, not servant. The legal policymaker has as much right to accept or reject a methodology as does the economist or psychologist in her particular discipline.

Methodologies are both formal and instrumental. Formal defenses of a methodology should carry little weight with the legal policymaker, however, because the formal rules of one discipline do not drive the formal rules of another. For example, the rational psychology that constitutes an important assumption for neoclassical economics could not be the social psychologist's assumption unless the psychologist was willing to subordinate her entire discipline to the

[23] *E.g.*, Donald Elliott, *The Evolutionary Tradition in Jurisprudence*, 85 COLUM. L. REV. 38, 38 (1985). *See also* Herbert Hovenkamp, *Evolutionary Models in Jurisprudence*, 64 TEX. L. REV. 645 (1985).

economist. The economist's methodology, just as the psychologist's, is driven by the questions he asks and the institutional constraints imposed upon his choice of answers. The legal policymaker is in the same position.

Methodologies are ubiquitously normative. The normative judgments of the legal policymaker are as good as those of the economist or social scientist. In fact, they are often better, for the legal policymaker is more experienced and comfortable with normative judgments and should be more willing to recognize normative judgments for what they are, rather than camouflage them in scientific rhetoric.

B. Well-Being and Method

Individual well-being clearly relates to preference and choice. Our society's two most important institutions, democracy and the market, are built on the premise that the state can enhance well-being by giving weight to people's preferences. This observation defines both the strengths and the limitations of modern law and economics. The strength of economics lies in the powerful methodologies it has developed for observing and rationalizing individual preferences as they are evidenced through voluntary market exchange or voter participation.

But the same methodologies also place serious limits on the domain of economics. It has not been able to deal adequately with two realities that the legal policymaker faces daily. First, preferences have both social and individual origins.[24] Second, preferences have levels of intensity that are not proportional to the preference holder's ability to pay. The neoclassical economist operates under the twin constraints of revealed preference and "ordinalism." The theory of revealed preference holds that individuals' preferences form the starting point of economic analysis. They are to be observed but not evaluated, except perhaps in the minimal sense of pointing out inconsistencies. Further, the only kinds of observations that count as revealed preference are market choices or analogous observations in which the subject ranks preferences against his budget. The sick man who writes the $100,000 check for his heart surgery has revealed his preference. The sick man who says "I would like that surgery very much but am unable to pay for it" has not revealed anything.

The second constraint, generally called ordinalism, holds that although individual preferences can be ranked, they cannot easily be weighted, and the intensity of preference can never be compared between persons. Ordinalism is necessary to satisfy the demands of the

[24] Richard H. McAdams, *Relative Preferences*, 102 YALE L.J. 1 (1992) (summarizing voluminous additional literature on the social determinants of preference); *see infra* text accompanying notes 104-25.

neoclassical economist's accepted methodology, but it imposes extraordinary limitations on neoclassical legal and political theory. For example, although markets can be mathematically shown to maximize "welfare," economically defined, no alternative mechanism of allocating resources enjoys the same status. Even democracy cannot produce welfare. Indeed, the principal failure of political theory driven by neoclassical economics—so-called "public choice"—is that ordinalism and the democratic principle of one person, one vote are inconsistent. Ordinalism insists that preferences cannot be weighted; democracy insists that one person's preferences are to be weighted as equal to another person's, since every person's vote counts precisely the same. Someone who begins with ordinalism as a premise will never be able to produce a stable, efficient system of public decision making in which preferences count equally.[25] In this sense, economics and democracy use incompatible measuring scales.

The market bias in contemporary neoclassical economics is a function of a methodological choice about how welfare should be measured. The bias results from the insistence that welfare be measured exclusively by reference to revealed preferences. More objective surrogates for welfare are inappropriate. But revealed preference is itself a surrogate, and its use to the exclusion of all other surrogates is simply the consequence of a methodological decision driven largely by historical events.[26]

Ordinalism assumes that individual utility functions are not comparable interpersonally in a way that permits one to rank the preferences of one person against the conflicting preferences of another. If a group of people all have the same ordinal rankings, one can say something about a change from one position to another. For example, if three hospital patients constrained to select the same fruit all prefer peaches to pears, a change from peaches to pears will improve the welfare of the group. However, if two prefer peaches while one prefers pears, we can say nothing about the effect of the change on group welfare, for there is no mechanism by which we can compare the strength of the one's preference against those of the other two.

The "new" welfare economics—that is, welfare economics operating under ordinalist constraints—has generally clung to this noncomparability thesis. For example, most of the literature in the economics of public choice takes noncomparability as a premise not

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[25] *See* Herbert Hovenkamp, *Rationality in Law & Economics*, 60 GEO. WASH. L. REV. 293, 325-30 (1992) [hereinafter Hovenkamp, *Rationality*].

[26] Herbert Hovenkamp, *The First Great Law & Economics Movement*, 42 STAN. L. REV. 993, 1031-56 (1990) [hereinafter Hovenkamp, *First Great Law & Economics Movement*]; *see* discussion *infra* Part II.

open to dispute. Since the 1950s, traditional neoclassical economics has given little attention to the merits of noncomparability itself.[27]

Nevertheless, the noncomparability thesis does not describe how economists actually measure human well-being for policy purposes. The stated assumption is that utilities are noncomparable. But the assumption as applied in policy analysis is that dollars produce the same amount of utility in everyone regardless of existing wealth. As a result, the transfer of a dollar has no welfare consequences[28] and cannot be justified within economics.[29] The extreme form of this position is wealth maximization, which identifies the optimal state as the one with maximum wealth regardless of distribution. Wealth maximization requires an assumption that the welfare produced by a dollar is both constant and the same for everyone.[30] This notion of the absolute comparability of dollars is inconsistent with ordinalism as a premise about welfare. Alternative suppositions that are far more robust, such as declining marginal utility of income, suggest radical programs for leveling wealth in society.[31] Respecting these concerns, the law and economics movement has simply been too un-self-conscious about its methodology. It jumps to questions of efficiency, economically defined, without giving sufficient thought to the relationship between efficiency and the state's duty to maximize the well-being of its constituency.

In considering the appropriate methodology for assessing welfare, one must distinguish two questions: (1) What is the "welfare" that people experience? and (2) How does the outside observer measure welfare? Neoclassical economists often assert that people's welfare is a function of their preferences. True enough. But that premise does not justify the merging of these substantive and methodological concerns.

The development of positivism and revealed preference theory in economics was strongly driven by a desire to emulate the methodology that had produced so much progress in the natural sciences since Darwin. As Milton Friedman put it, "positive economics is, or can be, an 'objective' science, in precisely the same sense as any of the physi-

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[27] Noncomparability is, however, often considered by other social sciences and by a few nontraditional economists. *See, e.g.*, Peter Hammond, *Interpersonal Comparisons of Utility: Why and How They Are and Should Be Made*, *in* INTERPERSONAL COMPARISONS OF WELL-BEING, *supra* note 22, at 200.

[28] Alternatively, if there are any transaction costs at all, the welfare effect of a forced wealth transfer is negative.

[29] *See* Hovenkamp, *Positivism*, *supra* note 20, at 845; POSNER, ECONOMIC ANALYSIS, *supra* note 1, at 461 (stating that forced wealth transfers are "in efficiency terms, a form of theft" whose "justification must be sought in ethics rather than in economics").

[30] *See, e.g.*, POSNER, THE ECONOMICS OF JUSTICE, *supra* note 10, at ch. 1-2.

[31] *See infra* text accompanying notes 178-80.

cal sciences."[32] Whether the natural sciences and the social sciences could ever find a common methodology is worth considering. In the natural sciences there is only one substantively relevant viewpoint to be considered: that of the observer. But in the social sciences there are two: that of the observer and that of the observed.[33] This fact immediately raises the question of interpersonal comparability. But the inevitable consequence of applying positivist methodology to the social sciences is to make the second viewpoint irrelevant. The only information that counts is that which is "external," or observed.[34] For example, the positivist psychologist cannot measure another's psychological anguish or pain—but he can measure screams, sleeplessness, blood content, or eating habits. Likewise, the economist cannot measure subjective perceptions of well-being, but she can measure preferences that are exercised through purchase in the marketplace.

Both economists and social scientists thus use surrogates for the subjective viewpoints of the observed. Importantly, *all* these methodologies are "positive" within the constraints imposed by the discipline at hand. But the surrogates for well-being used by psychologists and sociologists are quite different from those used by economists. The question whether the legal policymaker must prefer one set of surrogates to another lies at the heart of any debate about the domain of law and economics. The most heroic accounting of the scope of law and economics is that only the economists' surrogates count. There is also a weaker version, that the economist's conception of "welfare" must be given greater weight than the conception of the other social sciences, perhaps because the economist's conception is more capable of precise measurement.

Both claims run into powerful obstacles. First, in order to facilitate precision of measurement, economics must define well-being idiosyncratically—certainly in a way that fails to capture everything the legal policymaker has in mind. Second, even when this redefined concept is used as a surrogate for well-being, the promised precision of measurement is realized much more in theory than in practice.

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32 Friedman, *supra* note 12, at 4.

33 *See* FRANK H. KNIGHT, ON THE HISTORY AND METHOD OF ECONOMICS (1963); PETER WINCH, THE IDEA OF A SOCIAL SCIENCE (1958); Alan Coddington, *Positive Economics*, 5 CAN. J. ECON. 1 (1972).

34 *See* L.L. BERNARD, THE TRANSITION TO AN OBJECTIVE STANDARD OF SOCIAL CONTROL (1911); JOHN B. WATSON, BEHAVIORISM (1924); JOHN B. WATSON, PSYCHOLOGY FROM THE STANDPOINT OF A BEHAVIORIST (1919); L.L. Bernard, THE OBJECTIVE VIEWPOINT IN SOCIOLOGY, 25 AM. J. SOC. 298 (1919). *See also* JOHN DEWEY, HOW WE THINK (1910); WILLIAM MCDOUGALL, AN INTRODUCTION TO SOCIAL PSYCHOLOGY (1909); MAX F. MEYER, THE FUNDAMENTAL LAWS OF HUMAN BEHAVIOR (1911); I.P. PAVLOV, CONDITIONED REFLEXES (1927); ALBERT P. WEISS, A THEORETICAL BASIS OF HUMAN BEHAVIOR (1925); Jared S. Moore, *Behavior vs. Introspective Psychology*, 30 PSYCHOL. REV. 235 (1923); Margaret F. Washburn, *Introspection as an Objective Method*, 29 PSYCHOL. REV. 89 (1922).

When other social scientists measure well-being, they use methodologies different from those of the economist. Often the methodologies do a much better job of explaining the situation in a way that is useful to the policymaker. To be sure, the methodologies have formal and conceptual weaknesses, but these weaknesses are no different in degree or kind than the methodologies of economics. Consider the following illustration:[35]

> Suppose the state takes one thousand dollars annually from wealthy Shelley in order to provide an income supplement to impoverished Alice. Shelley occasionally complains about high taxes; but he continues to drive his BMW and live in his large home. We observe only that his annual contributions to his savings are reduced by one thousand dollars per year. But Alice appears greatly affected by the additional income. She now sleeps at night, without worry about feeding her children. For the first time, she is able to purchase an automobile or perhaps go to night school. She moves into a better apartment, which has more room and better heat.

An orthodox Paretian would say that the welfare content of the above transfer is indeterminate. At least one person (Shelley) is made worse off by the transfer, so it is not a Pareto improvement. Kaldor-Hicks, or cost-benefit, analysis would say that the transfer is welfare neutral, for Alice received precisely as much wealth as Shelley gave up. If one includes incentive effects (for example, if this is a tax on income, Shelley will work less hard), the transfer is inefficient. Further, if the costs of administering this wealth transfer program are anything above zero, as they almost certainly are, the wealth transfer program is inefficient. The resources used to run the program, or by those attempting to comply with it, could be used elsewhere.[36]

But now suppose a group of psychologists devises a Test for Personal Well-Being (TPW). The TPW could consist of a series of questions designed to determine the subject's personal attitude about his well-being, both absolutely and in comparison with others. Alternatively, the TPW might consist of a problem-solving session, a blood test, a sleep test, and a physical checkup. The TPW is scored from one to one hundred, and each point is presumed to represent one unit of well-being; further, the units of well-being are presumed to be constant. That is, a move from a score of sixteen to seventeen on the TPW is presumed to show an increase in absolute well-being of the same magnitude as a move from eighty-eight to eighty-nine.[37]

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35 Adapted from Hovenkamp, *Positivism*, *supra* note 20, at 843.

36 *See, e.g.*, GORDON TULLOCK, THE ECONOMICS OF WEALTH AND POVERTY 136 (1986).

37 *See* M. ARGYLE, THE PSYCHOLOGY OF HAPPINESS (1987); D.C. Shin & D.M. Johnson, *Avowed Happiness as an Overall Assessment of the Quality of Life*, 5 SOC. INDICATORS RES. 475 (1978). For an example, see W.A. Arrindell et al., *The Satisfaction With Life Scale (SWLS): Psychometric Properties in a Non-Psychiatric Medical Outpatients' Sample*, 12 PERSONALITY & INDIVIDUAL DIFFERENCES 117 (1991).

The psychologists administer this test to a large sample of people in Shelley's position before and after the above legislative transfer program takes effect. After accounting for other factors, they conclude that, as a result of the payment, well-being among this group declines from 90.2 to 89.9 TPW points. This decline is too small to be judged significant. They also administer the test to a large sample of people in Alice's position and find that, on average, their score moves from 16 TPW points before the program takes effect to 49 points after. This 33 point increase is deemed quite substantial. The psychologists conclude that the legislative program has increased net well-being a great deal.

The neoclassical economist will have many critical things to say about the TPW:

> (1) There is no way to verify that TPW points actually measure subjective well-being; at best the test produces (a) information about how people think they feel in comparison to others, but that is not an empirically verifiable comparison; and (b) objective information about health or anxiety that an external observer of large groups of people might presume to be related to well-being. We can never verify any relationship between such things as a person's stress level as measured by her blood pressure and her subjective well-being;
> (2) The TPW is not a *precise* measure of anything—if it is a measure at all, it is a measure only of someone's idea about the content of well-being, and this is a very pliable concept.
> (3) The TPW arbitrarily sets one hundred points as the largest amount of "well-being" a person can have, and assumes that everyone has the same total capacity for well-being;
> (4) The TPW generalizes about the "well-being" of a large group of people, while "well-being" properly defined is a highly individualized concept;
> (5) Even assuming that there is a positive correlation between subjective well-being and TPW points, the test makes an unwarranted assumption that this relationship is linear—that each TPW point on the scale measures the same increment in well-being. For all we know, Shelley's decrease of .3 TPW points in the above illustration represents more well-being than Alice's 33 TPW point increase.

Each one of these criticisms carries some weight. But each applies equally to the TPW test and to the accepted methodology of the applied welfare economist.

First, observed consumer behavior or even observed willingness to pay is not the same as observed subjective well-being, but only a surrogate. Such observations tell us only how people rank priorities given the resources they have. Observed consumer behavior says nothing about absolute happiness or satisfaction, or about the comparative satisfaction that two people might have.

Second, on the question of "fit" between TPW points and well-being, the answer is simple: we can never establish a precise fit—but

neither can the positivist economist establish a precise fit between well-being and revealed market preference, given that it is limited to market choices made by those able to pay. Which "fit" is better? That question is purely normative and involves such judgments as whether to consider only people's existing wealth in measuring their well-being, as revealed preference theory does, or to try to measure preferences independent of existing wealth, as the TPW does.

The best argument for considering only people's existing wealth is that it provides a more rigorous basis for measurement. But this argument throws away a great deal for something small in return. Intuitively, it seems clear that the concept of well-being includes many things not captured by wealth. People can have preferences, even strong ones, that are never exercised in the marketplace, because they lack sufficient wealth. On the other side, the argument that we should consider only existing wealth because this makes prediction more reliable does not survive close scrutiny. Often the improvement in prediction is illusory.

One defense of a narrowly neoclassical economic approach to law is that economics is much better than the other social sciences at explaining legal rules.[38] The nature of the argument seems to be that when alternative social sciences are applied to the law, they simply do not have the same explanatory power that economics has. But if that is so, it is difficult to understand what "explanatory power" means.

The proposition that economics is superior in supplying after-the-fact explanations for legal rules seems plausible when the relevant actors are business firms and we *assume* profit-maximization. In such a case, economics obviously explains better because the economist's working assumption of profit-maximization is built into the model itself. When the actors are consumers, who maximize utility rather than profits, this claimed superiority vanishes. The relative explanatory power of legal models depends entirely on how one states the propositions. Sociology probably does as good a job as economics of "explaining" Equal Protection and Civil Rights law, or why sex with animals is illegal, or why the certainty of incarceration deters more effectively than long prison sentences with reduced risks of incarceration. Psychology probably does as well as economics at "explaining" freedom of speech and religion, the right not to testify against oneself, and even such basic phenomena as why marriage and the employment relationship are not simple matters of contract law, or why trespassory acts by the government are "takings" even if the economic damage is small, while government regulation often does not constitute a taking even when the economic damage is large.[39] One might dispute any

[38] *See, e.g.*, Posner, *Decline of Law*, *supra* note 11.

[39] *See, e.g.*, Loretto v. Teleprompter Manhattan CATV Corp., 458 U.S. 419 (1982) (trespassory taking; little or no injury); Penn Cent. Transp. Co. v. New York City, 438 U.S. 104 (1978)

one of these propositions, but the claim that law and economics has superior explanatory power in these areas is not obvious.

Third, an important difference between the welfare economist's test based on revealed market preference and the TPW is that the economist measures welfare by starting with a person's existing resources: each person has as many points as he has dollars, or income producing capacity. In the TPW, everyone is arbitrarily given one hundred points—but, importantly, everyone is given the *same* number of points. Is one premise a more scientific measure of subjective well-being than the other?

To put the question in a more relevant form, is one premise better than the other for those engaged in legal policymaking? Neither assumption is verifiable or falsifiable; both are strictly normative. The proposition that all people have the same capacity for experiencing happiness or pleasure may strike us as implausible. But the proposition that a person's capacity for experiencing happiness or pleasure is directly proportional to her wealth or income is at least as implausible. Further, the first proposition is intuitively more consistent with democratic theory. Whether or not people have the same capacity for experiencing happiness, the democratic legal policymaker must treat them that way.

Importantly, tests such as the TPW are concerned with relative rather than absolute measures of well-being. A standardized college or professional school admissions exam such as the GRE might have a set of possible scores that range from zero to sixteen hundred. The existence of such a range does not suggest that everyone has the same capacity for intelligence, that no one could ever be smarter or better prepared than a perfect score indicates, or anything of the kind. It merely suggests that for those people who perform within the range we can make some kind of assessment of relative ability. It is quite possible that one hundred people might take the test and sixty of them obtain a perfect score. In that case, if we wanted more information that would enable us to discriminate among the sixty, we would have to devise a more rigorous test. By contrast, if one hundred people took the test and only three received a perfect score we might decide that our information is good enough for the purpose at hand, such as deciding who can go to a particular graduate school. If we are going to admit the top thirty anyway and not use the test for another purpose, the relative abilities of the highest three need not be subject to further testing.

(burdensome regulation; no taking); Robert C. Ellickson, *Bringing Culture and Human Frailty to Rational Actors: A Critique of Classical Law-and-Economics*, 65 CHI.-KENT L. REV. 23, 38 (1989).

For purposes of state policymaking, relative measurements of well-being are all that is necessary, provided that the test we use covers the range over which we are concerned. That is, the state must make some useful generalizations about well-being; it need not obtain perfect information about every factor in the well-being of every individual. The state leaves idiosyncratic needs, particularly those of the well off, to the market. For example, the state need not be concerned with whether a $60,000 Mercedes-Benz or a $60,000 Picasso drawing adds more to one's well-being, since the market will determine the distribution of such resources. The State's principal concern for well-being lies in the area of basic, universal needs—housing, food, clothing, and education.

Fourth, it is true that the TPW generalizes about the "well-being" of a large group of people, while "welfare" economically defined reflects individual market preference. But to the extent that applied welfare economics relies on empirical data, it also aggregates people into large groups and generalizes about them. Indeed, for the legal policymaker considering a proposed statute or legal rule, generalization is unavoidable. Consider the optimal sentence for the child molester. The economic solution is to create a sentence that will deprive the molester of the utility of child molestation, multiplied by the inverse of the probability of detection.[40] But the first variable simply cannot be calculated over large groups of child molesters without engaging in interpersonal utility comparisons.[41] Likewise, the probability of detection will vary greatly from one particular incident to the next; but those enforcing the law would have to come up with some aggregate estimate. In any event, the economist's supposition that people's measure of subjective well-being is purely individualistic is itself unverifiable, normative, and very likely wrong. A good deal of evidence suggests that (1) people evaluate their well-being by comparing their situation with that of others, and (2) people's judgments about what they want are socially conditioned.[42]

Fifth, the TPW's assumption that one test point is equal to one "unit" of subjective well-being is completely unwarranted empirically, but so is the economic assumption in both cost-benefit analysis and wealth maximization that the marginal utility of income is constant, and that a dollar creates the same amount of economic welfare in eve-

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[40] *See* Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169 (1968); Richard A. Posner, *An Economic Theory of the Criminal Law*, 85 COLUM. L. REV. 1193 (1985).

[41] Posner admits this, in the context of liability for negligence. See POSNER, ECONOMIC ANALYSIS, *supra* note 1, at 167.

[42] *See* MICHAEL ALBERT & ROBIN HAHNEL, QUIET REVOLUTION IN WELFARE ECONOMICS (1990).

ryone. Both are attempts to cardinalize gradations of human experience or value that can only be ranked ordinally.

In this case, the psychologist is far ahead of the economist. At the very least, the careful tester would conduct "interval scale" measures to help her ensure that test scores relate to the thing being measured in a linear (or some other formulaic) fashion. The science of psychometrics has wrestled with these issues for a long time and has not, as welfare economics has, thrown up its hands and simply presumed lineality.[43] One can say something meaningful about the interval between numbers on a test score by finding a secondary criterion for comparing differences at one point on the scale with differences at another point. The relationship between wealth and well-being would absolutely flunk an interval scale test of this sort, assuming that individuals do in fact experience declining marginal utility of income and that they have different utility functions.

In sum, Richard Posner's conclusion that justifications for forced redistribution "must be sought in ethics rather than in economics"[44] necessarily includes within "ethics" the methodologies of psychology and other social sciences that measure welfare by use of surrogates other than revealed preference. This represents a myopic vision of the scientific method and a form of economic supremacy that is simply not incumbent on the legal policymaker.

C. *"Welfare" in Economics and Social Science; Paretianism as a Welfare Criterion*

Economic methodology purports to eschew objective welfare judgments. Economic welfare is measured by revealed preference, which refers to observations of people's choices among market alternatives.[45] Such an approach to welfare measurement is called "subjective" because it relies on the observed choices that individuals subjectively make.

The other social sciences are also concerned with human welfare, often called "well-being" to distinguish it from the economist's "welfare." Well-being in the other social sciences is generally measured by a combination of subjective and objective criteria. For example, in some branches of psychology human satisfaction is measured by ask-

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[43] On the methodology, see RAYMOND B. CATTELL & RONALD C. JOHNSON, FUNCTIONAL PSYCHOLOGICAL TESTING (1986); HANDBOOK OF PSYCHOLOGICAL ASSESSMENT (Gerald Goldstein & Michel Hersen eds., 2d ed. 1990); JOHN RUST & SUSAN GOLOMBOK, MODERN PSYCHOMETRICS (1989).

[44] POSNER, ECONOMIC ANALYSIS, *supra* note 1, at 461.

[45] On revealed preference, see HAL R. VARIAN, INTERMEDIATE MICROECONOMICS, ch. 7 (1987).

ing questions, or by observing external responses such as chemical imbalances, sleeplessness, crying, or laughter.[46]

Economists are likely to be suspicious of such procedures. But psychologists are just as likely to be suspicious of the economist's equation of market choice with welfare. The objective measures of well-being used in psychology and the other social sciences are no less scientific than revealed preference theory. Each discipline has developed its own standards for evaluating evidence; proclaiming one more scientific than the other requires a purely normative judgment.

The way psychologists and other social scientists measure welfare is certainly not very rigorous if measured by standards that apply to, say, physics or chemistry. On the one hand, the conclusions that people who scream are in pain, or that people who are suicidal, continually tired, insomniac, or ill are not as happy as they could be seem quite reasonable, especially if we are talking about statistical relationships determined over large numbers of people. Nonetheless, an important limitation on the psychologist's ability to measure is that one cannot easily correlate the amount of screaming a person exhibits with the amount of subjective pain that he feels. There is no basis to conclude, for example, that twice as much screaming indicates twice as much subjectively perceived pain, or that a given amount of screaming by one person indicates the same discomfort as similar screaming by someone else.

But these limitations indicate only that the relationship between screaming and subjective pain is both *ordinal* and *noncomparable* from one person to another. Such limits on the psychological measure of response to stimulus are not different in principle than the limits of economic welfare theory. *Intra*personal cardinal utility functions are difficult to measure. *Inter*personal comparisons of cardinal utilities are impossible. When it seeks to measure well-being, psychology operates under limitations that are no different in kind or magnitude from those that apply to economics.

Nonetheless, it is disheartening to view the psychological and sociological literature on well-being. One who reads it finds little agreement about the determinants of well-being, the types of tests that should be used for measuring it, or the types of scales on which such tests should be scored.[47] Indeed there are almost as many tests of

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[46] On psychologists' empirical methodology for making such determinations, see *supra* note 43.

[47] For some of the extraordinary variety, see ANGUS CAMPBELL ET AL., THE QUALITY OF AMERICAN LIFE (1976) [hereinafter CAMPBELL ET AL., AMERICAN LIFE]; Arrindell et al., *supra* note 37; *Classic and Current Social Comparison Research*, 108 PSYCHOL. BULL. 195 (1990); Michael Ross et al., *Determinants of Subjective Well-Being*, *in* RELATIVE DEPRIVATION AND SOCIAL COMPARISON (James M. Olson et al. eds., 1986); Shin & Johnson, *supra* note 37. For a comparison of objective (external determinants) and subjective (interviews) tests on the same

well-being as there are testers. Psychology has no equivalent to the economist's Paretianism as a relatively uncontroversial minimum normative standard. In this respect, economics is ahead of the other social sciences.

But posing the problem this way presents a false comparison. Economists are really not very interested in relating some conception of human well-being to Paretianism or any other economic welfare criterion. The reason for the great diversity of opinion in the social sciences and relative consensus in economics is that, for psychologists and sociologists, well-being is an *empirical* problem, while it is not for the economists. Paretianism is no more than the minimal concept of market efficiency that can be justified, given that utilities are noncomparable. It has nothing to do with how well off people feel.

This point is often overlooked, but it cannot be underemphasized. Economists do empirical research, but their research generally involves determining the kinds of conditions that will make markets Pareto efficient. Economists simply do not explore whether there is a correlation between Pareto efficiency and subjective well-being; Pareto efficiency is itself a purely formal definition of welfare. Even with respect to cost-benefit analysis, economists generally engage in the formal assumption that more wealth, measured by willingness to pay, means more welfare. Little economic research is concerned with whether wealthier people or societies have more happiness or well-being than others in some subjective sense, or whether people are happier when markets operate efficiently. Even when such research is done, it is not classified as "economic." It is performed by psychologists or sociologists.[48] Indeed, economists are often openly hostile toward empirical research that deals with economics' basic determinations of welfare. A good example is the reaction of many to the offer-ask disparity discussed below.[49] The most people are willing to pay for a certain entitlement is often less than the least they are willing to accept to give up the same entitlement, if they already have it. This conclusion becomes increasingly robust with testing, but it comes with an enormous problem: it throws much economic theory into disarray.[50] Instead of exploring these implications, however,

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general question, see M. SCHNEIDER, THE QUALITY OF LIFE IN LARGE AMERICAN CITIES: OBJECTIVE AND SUBJECTIVE SOCIAL INDICATORS (1975).

48 *See, e.g.*, CAMPBELL ET AL., AMERICAN LIFE, *supra* note 47; Philip d'Iribarne, *The Relationships Between Subjective and Objective Well-Being*, *in* SUBJECTIVE ELEMENTS OF WELL-BEING 33 (Burkhard Strumpel ed., 1972); *see also* CENTER FOR COORDINATION OF RESEARCH ON SOCIAL INDICATORS, SOCIAL SCIENCE RESEARCH COUNCIL, SOCIAL INDICATORS, 1973 (Roxann A. Van Dusen ed., 1973) [hereinafter SOCIAL INDICATORS]; ANGUS CAMPBELL, THE SENSE OF WELL-BEING IN AMERICA 63-69 (1981) [hereinafter CAMPBELL, WELL-BEING IN AMERICA].

49 *See infra* text accompanying notes 134-40.

50 *See infra* text accompanying notes 141-44.

many economists simply ignore the problem or insist that something must be wrong with the theory.

Economists cannot even make the relatively weak claim that economics is worth studying because we can presume a correlation between wealth and well-being. Even this claim legitimizes the basic interpersonal comparison. Exactly *what* is the correlation? Granted, nearly everyone agrees that there is a robust correlation between wealth and well-being, but that does not mean that more wealth in the abstract creates more well-being. There is a positive correlation between the amount of water a field receives and its productivity. But that does not make the farmer indifferent as to whether the water is distributed evenly, or whether ten inches is placed on one acre while the rest goes dry. There are other robust correlations, too—between health and well-being, for example—that economics chooses to ignore.

So the question is not whether economics has come further than the social sciences in measuring well-being. Economics does not generally measure well-being at all. The other social sciences do, although imperfectly. The policymaker's legitimate concern with the well-being of a society's members is very poorly defined by economics.

D. The Limited Role of Rationality Assumptions

A common criticism of law and economics is that its view of legal rules is too one-dimensional. Economics alone cannot account for all aspects of human motive, behavior, or value. A multi-disciplinary approach that incorporates other social sciences would yield a richer, more meaningful, and more responsible accounting.

The argument is hardly new. In 1974 the late Arthur Leff faulted the young law and economics movement for being too narrow in its view of human behavior. Models that included information gleaned from psychology and sociology would be much richer and more explanatory.[51] Since then, a spate of literature has revived that theme: in their effort to obtain quantitative precision, economists have been forced to ignore some very important elements of human well-being and motivation.[52]

Within law and economics, arguments for increased accommodation of psychology and other social sciences come up most frequently

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[51] Arthur A. Leff, *Economic Analysis of Law: Some Realism about Nominalism*, 60 VA. L. REV. 451 (1974).

[52] A few examples, from a variety of perspectives, include: PETER E. EARL, THE ECONOMIC IMAGINATION (1983); ROBERT C. ELLICKSON, ORDER WITHOUT LAW (1991); AMITAI ETZIONI, THE MORAL DIMENSION (1988); SHAUN H. HEAP, RATIONALITY IN ECONOMICS (1989); PSYCHOLOGICAL FOUNDATIONS OF ECONOMIC BEHAVIOR (Paul J. Albanese ed., 1988); KIM L. SCHEPPELE, LEGAL SECRETS (1988).

in reference to one particular problem: the rationalistic psychology that forms a necessary assumption of marginalist model building. Economists assume that people are rational maximizers of their own satisfactions. From this they derive a number of corollaries: that a person will make any exchange that increases her utility; that business firms maximize profits; that people calculate risks and respond rationally; that people equate marginal utilities; and that they incorporate into economic decision making any information they can obtain at a cost lower than its anticipated value. By contrast, most uses of psychology to criticize law and economics dwell on the "irrational" side of human behavior, or the observed fact that people sometimes fail to do one or more of the things in the above list.[53] These critiques show that economics cannot explain everything it purports to explain.

Neoclassicists generally, and quite correctly, respond that the rationalistic psychology of economics is not so much an assumption about actual human motivation in individual cases as a way of generalizing about large numbers of cases. This debate has generally not proceeded much beyond this point. Psychologists continue to find evidence that people behave "irrationally," as defined by the economist's assumptions. Most economists continue to make models that do not make substantial use of these findings.

Richard Posner has argued consistently for theories of law and economics that are uncomplicated by the insights of the social sciences. He addresses two different questions. The first is whether *alternative* models drawn from the social sciences have as much explanatory power as economics. The second is whether economic models about law should be *supplemented or enriched* by the other social sciences. The first question views economics and the other social sciences as competitors; the second views them as supplements.

On the first question, Posner appears to concede that models derived from sociology and psychology may sometimes be alternatives to models derived from economics. If models derived from economics are useful for a particular purpose, they should continue to be used. Models drawn from a different social science may be useful as well, albeit in a different domain. But Posner also argues that the social sciences have not come nearly as far as economics in providing explanatory models for legal rules; if they are to be used in the alternative, economics is usually better.[54] As recently as 1992, he concluded that the "economic theory of law is the most promising positive theory of law extant," and that positive analyses of the legal system drawn

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53 *See, e.g.*, ETZIONI, *supra* note 52, at 1-32.

54 Richard A. Posner, *The Future of Law & Economics: A Comment on Ellickson*, 65 CHI.-KENT L. REV. 57, 60-61 (1989) [hereinafter Posner, *The Future of Law & Economics*]; Richard A. Posner, *The Decline of Law as an Autonomous Discipline*, 100 HARV. L. REV. 761, 769 (1987).

from the other social sciences are "insufficiently rich in theoretical or empirical content to create serious competition for the economists."[55]

On the question whether insights gleaned from the social sciences can and should be used to enrich economic models, Posner's position is more complex. First, he believes that at least in some minimal sense the use of such insights is good and that people engaged in law and economics are already doing so. For example, the economic concepts of "bounded rationality," risk aversion, and information costs owe much to psychology for their development.

At the same time, Posner seems quite concerned lest this move for multidisciplinarity be pushed too far. Milton Friedman's methodological positivism seems to dominate Posner's thinking here: to the extent that the function of economic models is to predict, stripped-down models that predict well are better than more complicated models that lose some of their predictive power. Complicating our model of human motivation with the insights of, say, psychology is not much of a scientific advance if the complications make model-building more cumbersome and the capacity to predict does not improve. Finally, Posner suggests that much of the work described as "psychological" or "anthropological" is really economic. The lines between the social sciences are less distinct than they were once thought to be, and economic models can account for many frames of reference attributed to other disciplines.[56] For example, the psychological concepts of bounded rationality and risk aversion, as noted above, have been expressly incorporated into economic models.

Many of Posner's points seem quite correct, although they must be confined to their appropriate domain. Psychological insights about the limits of human rationality pose little threat to many of the central concerns of law and economics. In other cases, they can be incorporated into economic models to give them more descriptive power. They then become part of "economics" itself. Oliver Williamson's pioneering work on bounded rationality and the nature and structure of business enterprise is a good example of this.[57]

But when one moves from price theory, or conventional economics, into *welfare* economics, Posner's claims lose their force. The sovereign's principal concern is not simply with human responses, but also with the level of human satisfaction. The policymaker measures the former only to draw conclusions about the latter. When the question is not "how will a utility-maximizing individual respond," but rather "what maximizes the well-being of those living in a particular

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[55] POSNER, ECONOMIC ANALYSIS, *supra* note 2, at 26.

[56] Posner, *The Future of Law & Economics*, *supra* note 54, at 60-61.

[57] OLIVER E. WILLIAMSON, THE ECONOMIC INSTITUTIONS OF CAPITALISM (1985).

society," insights from the other social sciences can contribute as much as economics does.

Objective welfare judgments in the social sciences generally proceed, not by assuming that human beings are irrational, but rather by disaggregating the concept of rationality from the concept of preference. For the welfare economist, rationality is nothing more than the content of preference. For example, the "transitivity" condition in Arrow's theorem expresses its concern for rationality by insisting that preferences be transitive. If *A* prefers *X* to *Y* and *Y* to *Z*, she must also prefer *X* to *Z*.[58] By contrast, a zoologist observing animals might define rationality in terms of instinct to survive. To the extent that social sciences are based on biological models, they interpret rationality the same way. The principal contribution to be made by the other social sciences is not in those areas where human beings are something less than rational. Rather, it is in their understanding that a biological conception of rationality can help us determine what people would choose *if* they had the resources to make the choice.

Incidentally, economists do this all the time when they speak about business firms, because profit-maximization imputes *content* to the rationality of the firm.[59] As a result, the economist can meaningfully predict how a firm will respond in a certain situation without observing the behavior itself or the preferences of the firm's managers. He simply asks, "What would be the profit-maximizing course of action?"[60] By comparison, the biologist or psychologist might ask, "What course of action will enable the organism to survive?" Profit-maximization in the theory of the firm and the instinct to survive in biological and social science are both imputed judgments about rationality, not observed preferences.

III. The Nature of Objective Welfare Judgments

A. Historical Sources: Darwinism and Marginalism

For legal policy, the two most important scientific ideas of the nineteenth century were Darwinism and marginalism. Both ideas led to the great revolution in the social sciences that took place in the 1870s and later.[61] Most of our modern debate about the relationship between law and economics on the one hand, and law and the remaining social sciences on the other, relates to the respective role of Darwinian and marginalist models.

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[58] *See* Hovenkamp, *Rationality*, *supra* note 25, at 318-28.

[59] *See infra* text accompanying notes 125.

[60] For example, the economist predicts that the firm will shut down if revenues fall below variable costs. *See* Varian, *supra* note 60, at 373.

[61] *See* Herbert Hovenkamp, *The Marginalist Revolution in Legal Thought*, 46 Vand. L. Rev. 305 (1993) [hereinafter Hovenkamp, *Marginalist Revolution*].

The central principle of Darwinism was the biological theory of evolution by natural selection. Organisms produce many more offspring than each niche in the environment is able to accommodate; as a result, individuals of a particular species compete to survive. Those who have inherited characteristics that give them a competitive advantage tend to have more offspring. These characteristics are passed on to future generations at a greater rate than less advantageous characteristics, which eventually disappear. Within this model, "preference" is defined as the instinct to survive, and success is defined by survival.

The starting point for Darwinian analysis of the human individual is the environment. An organism's choices are determined by the situation around it. By contrast, marginalism begins with the human as an autonomous decisionmaker.[62] Each individual has a certain amount of wealth and a collection of wants. As his desires for some particular thing are fulfilled his wish for more diminishes. The individual then maximizes his welfare by purchasing goods in such a quantity that, at the margin, the amount of satisfaction each gives him is precisely the same.[63]

Darwinism is mainly an empirical concept. *On the Origin of Species* attempts to prove its truth by a mountain of empirical evidence.[64] By contrast, marginalism is fundamentally an analytic concept that cannot be verified at all. For example, we cannot verify that a person purchases wine and apples in a combination that equates his marginal utility for the two, because to do so would require both cardinalization and interpersonal comparison of utilities.

The distinctions are critical because they mean that the economist studies preference only by studying the choices of those whose preferences are at issue. By contrast, the Darwinian biologist or social scientist can infer preferences from the environment itself. Both models are reductionist. For the economist, the determination of preference is limited to observations of market choice with existing resources. For the Darwinian, preference is based on inferences about the ability to survive and be productive, drawn from study of the physical and mental abilities of the organism and its environment.

During the Progressive Era, Darwinism and marginalism competed as models of human behavior. The Progressive view that interpersonal utility comparisons were appropriate and that one could use them to justify state welfare policy was really nothing other than an attempt to integrate the Darwinian and the marginalist views of human nature. Darwinian models tend to assume that if human be-

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[62] *See, e.g.*, W. STANLEY JEVONS, THE THEORY OF POLITICAL ECONOMY 1 (London, MacMillan 3d ed. 1888) (stating that "value depends entirely on utility").

[63] *Id.* at 51-60.

[64] CHARLES DARWIN, ON THE ORIGIN OF SPECIES BY MEANS OF NATURAL SELECTION; OR, THE PRESERVATION OF FAVOURED RACES IN THE STRUGGLE FOR LIFE (London, Murray 1859).

ings have common characteristics and share a common environment, they have a utility curve that is also common over a significant part of the curve's range. Using this model, Progressive Era economists could speak of social as well as individual wants.[65]

The ordinalist critique, which convinced most economists that interpersonal utility comparisons are scientifically impossible, separated marginalism and Darwinism insofar as economics was concerned.[66] For the ordinalist, the human utility curve was nothing more than the aggregate of individual preferences, and it was simply unscientific to look behind the preferences themselves to the environmental factors that had produced them. Importantly, economists did not make this choice for lack of physical evidence on the source of preference. That evidence is abundant. Rather, they justified their choice by constraining evidence relevant to identifying preference—namely, observed choice in private or political markets. From that point on, economics would not really be a "social" science as that term was historically understood.[67]

Although ordinalism cut the knot between Darwinism and marginalism for the economist, the strands held by the legal policymaker remain intertwined. Therefore, the legal policymaker must view economics as only one of the offerings of the human sciences.

B. Legal Policy and the Measurement of Value

The legal policymaker in a mixed economy (one where goods and services are provided both by markets and by government) uses the concept of value in two ways. One relates to how people behave. People begin with a budget and then make choices. They purchase goods in a mixture that tends to maximize their total utility, which generally occurs when the last dollar spent on one good gives that person the same amount of utility as the last dollar spent on any other good.[68]

The second concept of value relates to subjective well-being and considers how much better off people might feel if they had something, even if they cannot now afford to pay for it. For example, the person with failing kidneys may wish a kidney transplant very badly even though he is not able to pay for it. In the first sense, he places a value of zero on such treatment. The transplant does not show up in his budget and he does not purchase it on the market. In the second

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65 *See* Hovenkamp, *Marginalist Revolution*, *supra* note 61, at 307-08.

66 *See* Hovenkamp, *First Great Law & Economics Movement*, *supra* note 26, at 1003-04, 1015-47.

67 Veblen noted this as early as 1898. Thorstein Veblen, *Why Is Economics Not an Evolutionary Science?*, 12 Q.J. ECON. 373 (1898) [hereinafter Veblen, *Evolutionary Science*].

68 *See* Hovenkamp, *Marginalist Revolution*, *supra* note 61, at 308-14.

sense, however, the value he assigns to a transplant may be very high, assuming we could find a way to measure it.

Around the turn of the century, Anglo-American economics was obsessed with the problem of defining and measuring value.[69] The problem had not generally bothered the classical economists. Market value was considered to be objective in the sense that it existed apart from the minds of the people who participated in markets. The principal determinants of value in classical political economy were labor and cost of production, both objectively measurable categories.[70] Even economists who led the modern neoclassical revolution, such as John Bates Clark, continued until well after the turn of the century to identify production costs as establishing a "natural value" for commodities.[71]

But the neoclassical incorporation of marginal utility theory into economics changed the basic idea of what value means and how to measure it. Emergent marginalism proved to have remarkable explanatory powers, but it depended on the notion that "value" means the utility-maximizing individual's subjective willingness to buy or sell. When one considers the ubiquity of marginalist models in modern economic analysis, it is easy to see why economists are tied to subjective value measures.

Liberal and Progressive economists initially objected to this move toward subjectivism in the determination of value for numerous reasons. First, it tied value to nothing more than individual willingness to pay, and this appeared to undermine any notion that economics is a "social" science. Under marginal utility theory plus subjective valuation, microeconomics seems to be nothing more than the study of how people make decisions to buy and sell. Second, because people are evolving biological organisms responding to a common environment, their basic needs and urges are much more similar than they are different. If economics was to stake any claim to being a biological science at all, it must deal with human beings as evolving creatures, responding in common to the constraints of their environments.[72] Subjective utility theory divorced economics from the other evolutionary sciences and eventually from the social sciences altogether. Third, the social sciences, including law, were developing models that eschewed subjective standards in favor of objective criteria.[73]

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69 *See* Hovenkamp, *First Great Law & Economics Movement*, *supra* note 26, at 1009-31.

70 *See* JACOB OSER & STANLEY L. BRUE, THE EVOLUTION OF ECONOMIC THOUGHT 72-74 (4th ed. 1988).

71 *See* JOHN B. CLARK, ESSENTIALS OF ECONOMIC THEORY 94 (1907).

72 *See* Veblen, *Evolutionary Science*, *supra* note 67.

73 In law, the best manifestation is Holmes and the External Standard. *See, e.g.*, Hovenkamp, *Marginalist Revolution*, *supra* note 61, at 335-45; Hovenkamp, *First Great Law & Economics Movement*, *supra* note 26, at 1047-56.

The Progressive economists took differing approaches to the merger of utility theory and the concept of value. For example, Thorstein Veblen argued in *The Theory of the Leisure Class* that marginal utility should indeed be the economist's baseline for measuring value, but the economist had to consider the utility of the "generic" human rather than of each human being individually. Utility analysis should begin with human beings as biological organisms with definable needs and consider the objective question of the mixture of goods and services that would maximize a person's social productivity. The test for a product's value should be whether it enhances "human life on the whole—whether it furthers the life process taken impersonally," rather than how it satisfies the needs of some particular individual.[74] Twenty years later, Veblen emphasized that the most relevant kind of "value" for the economist was value-in-use, not exchange value, and that value-in-use was best determined objectively by procedures involving sciences other than economics.[75] For example, the social value of a drug, such as penicillin, should be determined not by its cost of production or its equilibrium market price, but rather by the increased healthiness and productivity that it accords to those needing protection from disease.

Other Progressives such as John Dewey and Clarence Ayres generally echoed Veblen's view that value has a social content and must be measured objectively across groups of persons, rather than individually on the basis of observed choice. Dewey argued that an individual's habits and tastes are entirely a product of his biological makeup as conditioned by the environment in which he finds himself. As a result, all important utilities are "social" in the sense that what we can say about their similarities is more useful than what we can say about their differences. For Dewey, the social utility of a good was its capacity to make an individual into a productive member of society, not the mere expression of an individual's willingness to pay.[76] Clarence Ayres sought to make these ideas empirically testable—for example, by conducting experiments respecting the importance of milk for infants in determining the social value that should be placed on its availability.[77]

The American Progressives anticipated the modern concept of "human capital," which views the human utility function as a kind of

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[74] THORSTEIN VEBLEN, THE THEORY OF THE LEISURE CLASS 318-19 (Viking Press 1967) (1899).

[75] *See* Thorstein Veblen, *Industrial and Pecuniary Employments*, *in* THE PLACE OF SCIENCE IN MODERN CIVILISATION AND OTHER ESSAYS 298, 307-11 (Thorstein Veblen ed., 1919).

[76] *See* JOHN DEWEY, INDIVIDUALISM OLD AND NEW 9, 135, 168-71 (1930); John Dewey, *Theory of Valuation*, 2 INTERNATIONAL ENCYCLOPEDIA OF UNIFIED SCIENCE 1, 19-50 (1930).

[77] *See* C.E. AYRES, THE INDUSTRIAL ECONOMY 305 (1952).

production function.[78] If we look at human beings principally as producers rather than consumers, then we can make more categorical social judgments about value. Just as aluminum plants need labor, electricity, and bauxite in a certain combination in order to operate, so too, human beings need shelter, food, and education. Indeed, if we begin with the premise that all human production "plants" are more or less the same, we can determine objectively the optimum mixture of inputs that would lead them to perform efficiently.

But by and large economics has shunted the work of Veblen, Dewey, Ayres, and other Progressives aside. The concepts of social or biological value that the Progressives advocated were never subject to the kind of precise quantification that neoclassical economists believed their discipline required. The neoclassical concept of value as strictly individual willingness to pay proved to be the foundation for mathematical theories of great elegance and simplicity. Under emergent positivism, this counted for a great deal and gave economics a claim of superiority over the other social sciences.

In 1909, Joseph Schumpeter spoke of the formal rules of economic reasoning as "methodological individualism."[79] The term implies, Schumpeter insisted, that neoclassical economics takes no position on such metaphysical questions as whether there are social values that trump individual values, whether socialism or some version of laissez-faire is the better economic regime, whether the state should be involved in redistributing wealth, and so on. The economist's individualism pertains only to the formal way economic analysis is conducted, not to the substantive premises from which it works.

But Schumpeter's own work reflected the *substantive* bias in his methodological individualism. Only individuals have wants, he argued; as a result, utility curves are strictly individual. Since only individuals experience wants and make budget decisions, only individuals can determine value. When later coupled with ordinalism and the doctrine of strict noncomparability of utilities, Schumpeter's methodological individualism entailed that there could be no such thing as a social utility curve—the very concept became meaningless because one could not reason from individual wants to social wants.

But there is no way of making Schumpeter's "methodological" individualism operational. Whether the economics is theoretical or applied, the method in practice always involves social aggregations. For example, the hard core of theoretical market analysis is price theory—the idea that competitive markets are efficient and that monopoly imposes a social cost. The social cost of monopoly is said to arise because the losses from inefficient substitutions that accrue to buyers

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[78] *See infra* text accompanying notes 197-206.

[79] Joseph Schumpeter, *On the Concept of Social Value*, 23 Q.J. Econ. 213, 231 (1909).

are greater than the pecuniary gains that go to the monopolist. But we can speak of this as a "social cost" only by translating the losses of consumers into dollar values, aggregating them, and balancing the result against the dollar gains to the monopolist. This exercise has simply substituted dollars for preferences in the utility calculus. A few economists from the Austrian school have adhered to a strict insistence on individualism, but in the process they have found few meaningful things to say about policy.[80]

If noncomparability of utilities and methodological individualism were taken seriously, *all* aggregations of values would be impossible. This does not mean that law and economics or even economics is impossible. It merely means that we must understand that every economic conclusion with the exception of strict Paretianism (which is a virtually useless policy tool) involves one set of surrogates for subjective individual value and a second set of surrogates for collective, or social, value. Once policymakers understand this, they can turn their attention to the more fruitful activity of determining which surrogates are operationally acceptable for their purposes.

C. *The Corresponding Limitations of Utility Information*

Legal philosophers often object that Pareto and Kaldor-Hicks efficiency are unsuitable welfare principles for evaluating legal rules because they are too reductionistic.[81] Such measures simply do not account for everything that human beings feel or that motivates them to act, and for which legal rules are relevant. Utilitarianism seems more useful, because the concept of utility accounts for human well-being much more comprehensively. Importantly, in making this choice, the legal philosopher trades away something very important—the measurement of utility is far more difficult than the measurement of wealth in constant dollars.

The legal policymaker may prefer utilitarianism to allocative efficiency because she regards jurisprudence as a science that is broadly social, or communitarian. Economic positivists tend to regard economics as a formal science that is only narrowly social. Broadly social sciences must tolerate a greater amount of uncertainty. To say that law is "broadly" social means that law has the obligation to account in some way for the entire range of perceptions and feelings, measurement difficulties notwithstanding. It may do this through the use of

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80 *See, e.g.*, LUDWIG VON MISES, HUMAN ACTION: A TREATISE ON ECONOMY 41-43 (rev. ed. 1963); LUDWIG VON MISES, THE ULTIMATE FOUNDATION OF ECONOMIC SCIENCE 80-82 (1962). *See generally* THE FOUNDATIONS OF MODERN AUSTRIAN ECONOMICS (Edwin G. Dolan ed., 1976) parenthetical.

81 *See, e.g.*, JULES L. COLEMAN, MARKETS, MORALS AND THE LAW 95-132 (1988); Ronald Dworkin, *Is Wealth a Value?*, 9 J. LEGAL STUD. 191 (1980); Ronald Dworkin, *Why Efficiency?*, 8 HOFSTRA L. REV. 563 (1980).

surrogates (such as the inference of intent from acts or of well-being from income, employment, or health); but no broad category of human actions or values may be deemed irrelevant to legal policy making.

In order to perform this role, however, legal policy must go beyond the theories of preference contained in both neoclassical economics and liberal utilitarianism. Utilitarianism suffers from the same weaknesses as the economist's revealed preference, plus a few additional ones. "Utility information" consists of facts about people's subjective preferences. Each of us has pretty good information about his own preference orderings, but rather poor information about the preference rankings of others. However, only a small part of the information we obtain about the well-being of others is utility information. Most such information is objective in the sense that it requires us to make presumptions about an average person's feelings or responses in a given situation. We see a screaming victim of a traffic accident and conclude that we should call an ambulance; we see people sleeping on heating grates and conclude that they would be better off with adequate housing; we test a person's blood pressure and decide his well-being would be improved with exercise and a low-salt diet. In some sense, we might speak of these judgments as "utilitarian." Indeed, they may be if we make the grossest possible interpersonal utility comparisons. For example, I may simply presume that the accident victim feels the same way I would if I were in her situation; since I would like someone to call an ambulance in my behalf, she will wish the same. But such judgments are not inherently judgments about *utility* at all, unless we redefine our conception of utility to include observed, biologically determined survival needs.

Modern law and economics tends to exclude objective welfare judgments such as these from the legal policymaker's consideration. Public choice generally does the same. A good deal of public choice scholarship seeks to show that political bodies cannot be trusted to discern the public interest or to make decisions that further the general well-being. But an important premise of such scholarship remains that the only kind of information public decision-making bodies are entitled to use is utility information.

Particularly vulnerable to this charge is the literature that attempts to apply Arrow's Theorem to group decision making.[82] Arrow's Theorem holds that under a set of defined conditions no group decision involving three or more issues can be stable and nondictatorial. But the theorem applies only to purely ordinal utility information. The theorem assumes that each participant in the pro-

[82] *E.g.*, WILLIAM H. RIKER, LIBERALISM AGAINST POPULISM 115-36 (1982); Frank H. Easterbrook, *Statutes' Domains*, 50 U. CHI. L. REV. 533, 547-48 (1983).

cess has a list of ordered, but unweighted, preferences and that these unweighted preferences are all that each participant is entitled to consider. Indeed, the aggregation of these unweighted preferences is all that may be considered in any determination of a social welfare function.

The notion that the policymaker must rely only on utility information is not merely technically incorrect; it is fundamentally absurd and fails to account for more than a small part of the informational basis of most public decision making. To the extent that group decisions made by democratic voting are based on nonutility information, Arrow's Theorem simply has no relevance.[83] Much public choice literature applies economics to public decision making processes with great technical skill, but is quite unreflective about fundamental assumptions, such as what kinds of information public decisionmakers are able to use when they consider what makes society better or worse off.

Utility and nonutility information are substitute types of information that the public decisionmaker uses in varying proportions to guide the decision at hand. Arrow's Theorem shows that utility information alone is not able to supply us with the predicates for a stable, welfare-maximizing social policy made by democratic institutions. Ordinarily, the discovery that one kind of information is less reliable or more expensive would encourage the producer to use less of that kind and substitute more of another. So Arrow's Theorem should incline legislators or judges to minimize their reliance on utility information and base their decisions instead on alternative measures of well-being. Accordingly, Arrow's Theorem should not increase skepticism about legislative outcomes. Rather, it should make us more skeptical about the use of law and economics to *evaluate* legislative outcomes.

D. The Status of Alternative Welfare Judgments

Psychology and other social sciences have shown great promise in assessing the effects of wealth, status, education, or other situations on well-being. The literature is not as vast nor the models as elegant as that developed by law and economics, but the domain of inquiry is larger and more relevant to the legal policymaker's ultimate concerns.

In measuring human well-being and determining the policies that will maximize it, the legal policymaker must make a tradeoff between accuracy of definition and accuracy of measurement. The neoclassical welfare economist seeks accuracy of measurement by heavily compro-

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[83] On the inapplicability of Arrow's Theorem to nonutility information, see AMARTYA SEN, CHOICE, WELFARE AND MEASUREMENT 18 (1982) ("[T]he information limitation of the Arrow format relates not merely to the poverty of the utility information but also to the eschewal of nonutility information. Most actual public judgments make extensive use of non-utility information . . . .").

mising accuracy of definition: economic "welfare" is both confined to those things capable of being procured with money and restricted to those choices that reveal themselves through market transactions. The result is that the economist's concept of "welfare" is much narrower than the psychologist's concept of "well-being," but the stripped-down definition of the economist is capable of generating observations to which numbers can be attached in a fashion that gives them great rhetorical power. The psychologist's definition of well-being is also stripped down from reality, but not as much as the economist's and not in the same ways.

Most importantly, however, the positive psychologist regards a wider range of observations as relevant. In general, observations about well-being can be classified into four types: (1) introspection; (2) revealed market preference; (3) "subjective" information about preference, such as responses to questionnaires or opinion polls; and (4) "objective" information, such as health or income effects. Most social scientists since the Progressive Era have rejected psychologist William James's arguments favoring (1).[84] Economists strongly prefer (2) to any of the other types. Those doing empirical research in the other social sciences are generally more eclectic and often use some combination of (2), (3), and (4). As an example, an important debate in social psychology over the past two decades has involved those who advocate "objective" indicators of well-being, such as health, education, employment, quality of one's living environment, or access to goods and services;[85] and those who advocate more "subjective" indicators, such as repeated interviews and questionnaires.[86]

All types of observations yield results that are capable of being modeled and are roughly predictive. The results are analogous to the economic concept of declining marginal utility of income. On the one hand, the very wealthy do not have a substantially more favorable perception of the quality of their lives than do the middle class. On the other, poverty has a noticeable impact on one's perception of well-being. So people's sense of well-being may increase with increases in wealth, but at a slower rate as wealth becomes greater. The studies also suggest other results—for example, that the impact of a college education on one's perception of well-being is significantly greater than its cost. Education itself produces more well-being than wealth

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84 *See* 1 WILLIAM JAMES, THE PRINCIPLES OF PSYCHOLOGY 185 (New York, Henry Holt & Co. 1890).

85 *See* Ross Homel & Ailsa Burns, *Environmental Quality and the Well-Being of Children*, 21 SOC. INDICATORS RES. 133 (1989); F.L. Mackellar & D. Vining, Jr., *Measuring Natural Resource Scarcity*, 21 SOC. INDICATORS RES. 517 (1989).

86 On the relation between objective indicators and subjective feelings, see CAMPBELL ET AL., AMERICAN LIFE, *supra* note 47; d'Iribarne, *supra* note 48, at 33; *see also* SOCIAL INDICATORS, *supra* note 48; CAMPBELL, WELL-BEING IN AMERICA, *supra* note 48, at 63-69.

equal to the education's price.[87] With enough such data one could construct a kind of "utility curve" that applies to groups of people rather than to individuals, although a neoclassical economist would not classify it as such, for it would not indicate utility as a function of observed individual preference.[88]

Psychologists using such methodologies generally engage in far more empirical research than those doing law and economics.[89] Unfortunately, empirical research often acts to reduce, rather than expand, a model's explanatory power. Indeed, the lack of empirical research may be precisely what enables the law and economics paradigm to hang together. Robin Hogart and Melvin Reder argue that the rational psychology paradigm has given economics a "disciplinary unity" not present in the other social sciences, but that the rational psychology paradigm survives only because it is tested so little.[90] Research seems to upset or conflict with the model's predictions as often as it tends to confirm them. Psychologists' vision of law is much less unified than that of law and economics for the simple reason that psychologists do more empirical research, do it at an earlier stage in the development of a theory, and take more seriously the obligation to adjust their hypotheses to account for unanticipated findings. If different experiments produce results that go off in different directions, so do the psychologists performing the experiments. But this is hardly a conclusive argument that economic models of legal rules are superior to models taken from psychology. It could as easily be evidence that the optimism about law and economics as an explanatory device is premature and that a more accurate assessment awaits further empirical testing. The relatively large amount of empirical testing of the "endowment" effect, or the offer-ask disparity, suggests as much. This is a major anomaly in neoclassical welfare economics that will not go away.[91]

Some economists have criticized their peers' use of revealed market choice as the indicator of welfare to the near exclusion of everything else. Amartya Sen faults the "tendency of welfare economics to ignore [alternative] basic constituents of well-being" and regards this shortcoming as "one of the striking limitations of our discipline."[92]

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87 CAMPBELL, WELL-BEING IN AMERICA, *supra* note 48, at 63-69.

88 *See* Walter W. Haines, *The Psychoeconomics of Human Needs: Maslow's Hierarchy and Marshall's Organic Growth*, J. BEHAV. ECON., Winter 1982, at 97, 99-100, 117-18.

89 *See* Vernon L. Smith, *Theory, Experiment and Economics*, J. ECON. PERSP., Winter 1989, at 151, 151.

90 Robin M. Hogarth & Melvin W. Reder, *Editors' Comments: Perspective from Economics and Psychology*, 59 J. BUS. S185, S188-89 (1986).

91 Herbert Hovenkamp, *Legal Policy and the Endowment Effect*, 20 J. LEGAL STUD. 225, 241-43 (1991) [hereinafter Hovenkamp, *Endowment Effect*].

92 AMARTYA K. SEN, COMMODITIES AND CAPABILITIES 45-46 (1985) [hereinafter SEN, COMMODITIES AND CAPABILITIES].

Sen argues simultaneously that (1) economists greatly exaggerate the reliability of observed market preference over other kinds of information for generating conclusions about well-being or utility, and (2) any advantage in reliability that revealed market preference may have does not compensate for the severe limitations that observed preference imposes on the domain of well-being.[93] Several economists, particularly from Europe, have begun to use nonmarket information to make welfare judgments.[94] As a result, many have recommended a much higher level of state intervention to provide such basics as housing and education.[95]

Models of well-being drawn from psychology have one important intuitive advantage over welfare models drawn from economics: they seem to be more faithful to the concept being measured. Economists recognized this already in the 1920s, before economics and the social sciences isolated themselves in their own respective methodologies. For example, Pigou distinguished "economic welfare" from "total welfare," defining the former as those aspects of welfare "that can be brought directly or indirectly into relation with the measuring-rod of money."[96] Sen suggests that Pigou approached the modern distinction between "welfare" in economics and "well-being" in psychology, but as Sen himself notes, the modern distinctions are different.[97] Many of the things that the psychologist denotes as well-being *can* be purchased with money. The psychologist may conclude, however, that something which can be purchased with money increases a person's well-being even if that person lacks sufficient money to make the purchase. For the psychologist, unlike the economist, ability to pay does not define the limits of well-being.

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93 For further development, see Hovenkamp, *Endowment Effect*, *supra* note 91.

94 *See, e.g.*, BERNARD M.S. VAN PRAAG, INDIVIDUAL WELFARE FUNCTIONS AND CONSUMER BEHAVIOUR (1968); Arie Kapteyn & B.M.S. Van Praag, *A New Approach to the Construction of Family Equivalent Scales*, 7 EUR. ECON. REV. 313 (1976); Arie Kapteyn & T.J. Wansbeek, *The Individual Welfare Function: Measurement, Explanation and Policy Applications*, 2 STAT. STUD. 32 (1982) [hereinafter Kapteyn & Wansbeek, *Individual Welfare Function*]; Arie Kapteyn & Tom Wansbeek, *Empirical Evidence on Preference Formation*, 2 J. ECON. PSYCHOL. 137 (1982); Bernard M.S. Van Praag, *The Perception of Welfare Inequality*, 10 EUR. ECON. REV. 189 (1977); Bernard M.S. Van Praag, *Further Evidence on the Individual Welfare Function of Income: An Empirical Investigation in the Netherlands*, 4 EUR. ECON. REV. 33 (1973); *see also* THE SCANDINAVIAN MODEL (Robert Erikson et al. eds., 1987). Earlier literature is summarized in Shlomit Levy & Louis Guttman, *On the Multivariate Structure of Well-Being*, 2 SOC. INDICATORS RES. 361 (1975).

95 *See* Kapteyn & Wansbeek, *Individual Welfare Function*, *supra* note 94.

96 A.C. PIGOU, THE ECONOMICS OF WELFARE 11 (4th ed. 1932).

97 Amartya Sen, *The Standard of Living: Lecture II, Lives and Capabilities*, *in* THE STANDARD OF LIVING 20, 26 (Geoffrey Hawthorn ed., 1985).

IV. Incompleteness and Indeterminacy in Preference-Based Legal Policy

A. The Inadequacies of Neoclassical Welfare Economics and the Use of Objective Judgments to Fill the Gaps

The two fundamental theorems of welfare economics suggest both the strengths and the limitations of economics in guiding legal policy. The First Welfare Theorem states that trading in competitive markets will continue to a Pareto-efficient equilibrium. At that point, no further trade can make both trading partners better off. The Second Welfare Theorem states that Pareto efficiency and wealth distribution are, for most purposes, unrelated to one another. There are an infinite number of starting distributions of wealth that, through trading in competitive markets, will yield an infinite number of Pareto efficient equilibria.[98]

Unfortunately, neoclassical welfare economics has not been able to *rank* these alternative Pareto-efficient outcomes according to the way wealth is distributed in them. An efficient equilibrium in which wealth is evenly divided cannot be proclaimed economically superior to an efficient equilibrium in which three people have ninety percent of the wealth and all others share the remaining ten percent. These alternatives are said to be Pareto-noncomparable because a move from one to the other will injure at least one person. For this reason, studies of the distribution of wealth are said to lie outside the boundaries of neoclassical economics.

So if government has a role to play in the distribution of wealth or entitlements in society, that role is not specified by traditional welfare economics. Nevertheless, government has a duty to maximize the well-being of its citizens, and this duty can be divided into two tasks. First, the state must ensure that markets run smoothly so they can attain efficient results. Contract law, the law of property rights, and more direct government intervention to correct market failure are all ways that the state does this. Second, the state must either devise a way of ranking starting points or ensure that the particular efficient equilibrium toward which the economy does move is in some sense better than the infinite number of alternative efficient equilibria to which it might move. This second task, which involves making explicit choices about the distribution of wealth, is thought to lie outside neoclassical economics. For that reason, the domain of state economic policy is larger than the domain of economics.

For economics, the rejection of interpersonal utility comparisons leaves only Paretianism as a relatively uncontroversial normative guide to economic welfare. But under the Second Welfare Theorem,

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[98] *See* Robin Broadway & Neil Bruce, Welfare Economics 83 (1984).

the Paretian conception of welfare is both distorted and incomplete in that it ties our definition of welfare to people's existing wealth and cannot compare the existing distribution with alternatives. As a result, welfare as economically defined measures the government's success in performing its *first* task, insuring market competitiveness. By contrast, the objective welfare judgment is concerned mainly with making judgments that compare social well-being under one starting distribution of resources with well-being under some alternative distribution.

The neoclassic concept of welfare is built on a powerful normative foundation that cannot be ignored. Our economic and democratic values insist that individual choice must be central to the state's system for allocating resources. We are willing to defend democracy because we cannot tolerate a dictator deciding who gets what. One problem with so-called "objective" welfare judgments is that they are not based on observations of market choice or interpersonal utility comparisons, but rather on observations of need, often using the observers' standards to determine what is needed and what is not. The extreme in such a welfare determination process is socialism, where resource allocation is determined not by a market at all, but by state command.

So the domain of objective welfare judgments must be limited if the traditions of Western democracy and capitalism are to be preserved. When the sovereign makes objective welfare judgments, it in effect draws the utility curve of the "average" person, just as the material welfare economists of the turn of the century were inclined to do.[99] But the curve should stop at the point where this presumed average person's choices about food, shelter, education, and other essentials for survival and productivity are adequately covered. Beyond that point, each individual's utility curve is her own.

Such a theory of value is not economic in the neoclassical sense, because market choice defines only part of the individual's utility function. The utility function is partly biological, for its common element is derived from the observation that human beings have survival and basic productivity needs that are much more homogeneous than more radical models of free choice imply. Further, these survival and productivity needs can be determined by a trained observer similar to the way that a properly trained engineer or businessperson can identify the optimal inputs of a manufacturing plant. But the model is also economic in the sense that it gives each individual considerable discretion to improve his well-being by productivity and trading. Human beings differ from most lower animals in that humans produce and manage a surplus. Within the strictly neoclassical model, a surplus

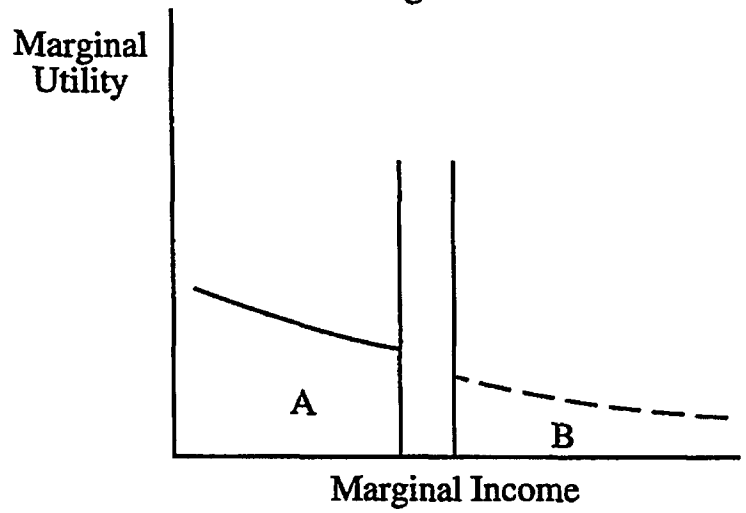
[99] *See supra*, text accompanying notes 72-77.

consists of everything a person produces beyond his own basic survival needs. Within the alternative model suggested here, a surplus consists of that which each individual produces after the survival and productivity needs of every person in society have been met.

The result is a "utility function" strictly for policy making purposes, whose specification requires not only economics but also the social sciences, the health sciences, educational policy, and perhaps other disciplines. To be sure, this utility function is difficult to specify. But that does not distinguish it from the utility functions that neoclassical welfare economics has discussed for a half century, but which have never been completely specified even for one individual.

Figure One illustrates this "utility function" for policy purposes, predicated on objective welfare judgments. The vertical axis measures marginal (not total) utility and the horizontal axis measures marginal income. The curve declines continuously from left to right to show the declining marginal utility of income—that is, each additional dollar produces additional utility above zero, but each additional dollar amount produces a smaller amount of additional utility than the previous dollar.

Figure 1



The left side of the function, designated part *A*, lies within the domain of objective welfare judgments. This roughly encompasses what the classical political economist called "primary" goods, including food, shelter, medical care, and education. That part of the curve is indicated by a solid line to show that all individuals are presumed to hold this part of the utility function in common.[100]

[100] On the use of objective information to estimate human need in this fashion, see ABRAHAM H. MASLOW, MOTIVATION AND PERSONALITY 35-38 (2d ed. 1970); WILLIAM MCDOUGALL, AN INTRODUCTION TO SOCIAL PSYCHOLOGY (1908); HENRY A. MURRAY, EXPLORATIONS IN

The right side of the utility curve, designated part *B*, is the marginal utility curve of an individual whose income is higher than that needed for the provision of primary goods. This part of the curve is drawn with a dotted line, because the curve is viewed entirely as a function of individual choice, and these choices vary from one individual to the next. In short, the left side of this utility curve for policy purposes is "social" in that it is presumed to describe the utility function of everyone in society, except those who have been identified as having unusual needs. The right side is individual, determined by each person's preferences after basic needs have been satisfied.[101]

All points on that part of the curve within area *B* are lower than any point of the curve within area *A*. We assume that any individual values the wealth necessary to procure primary goods in an amount determined by objective welfare judgments more than wealth that will procure anything beyond that point. As a result, the transfer of a dollar from someone whose income is in the *B* range to someone whose income is in the *A* range will increase social well-being. Indeed, in order to reach this conclusion the state need not specify the shape of the curve through range *A* very precisely; it need know only where area *A* stops and area *B* begins. By contrast, if the government wants to develop more detailed social policies for the provision of housing, education, and the like, then it must specify the shape of *A* in more detail. The welfare consequences of wealth transfers from one person whose income is in area *B* to another person in area *B* are presumptively not knowable. They are also outside the state's economic concern, except insofar as its policy is to facilitate competitive markets.

Finally, in order to avoid ambiguity later, it is important to understand that objective welfare judgments are based on *non*utility information as utility is generally understood within economics. That is, such judgments do not depend on revealed market choice, but rather on observations of group responses or, in some instances, on observations that relate to defined external standards of presumed well-being.

B. Problems Relating to the Nature and Source of Preference

Psychology tells us a great deal about people's motives in making choices. Under what conditions will a person pay more for security, clothing of a particular kind, jewelry, fur, or ostentatious automobiles are eminently psychological questions.

Many individual preferences are "irrational" in the sense that one cannot easily develop a model that will predict the particular choices

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PERSONALITY (1938). For a contemporary application of Maslow's hierarchy, see ELAINE WALSTER ET AL., EQUITY: THEORY AND RESEARCH (1978).

101 For a defense of the basic distinction, although not of this particular approach, see AMARTYA K. SEN, CHOICE, WELFARE AND MEASUREMENT 66-67 (1982); SEN, COMMODITIES AND CAPABILITIES, *supra* note 92, at 2-4.

that an individual will make under differing circumstances. People in general are not wealth-maximizers. Other things compete with money in their hierarchy of values. Indeed, several social science studies have concluded that the correlation between wealth and well-being is poor at best.[102] Likewise, people's preferences are heavily affected by their social position.[103] Further, although in the "psychological middle" of society people may have more or less similar preferences, provided we define them with sufficient generality, at the psychological margin preferences become quite idiosyncratic.

Thus we know that the so-called "rational psychology" assumed by classical and neoclassical economics is only a part of the real psychology that motivates human actors. But how much does this fact undermine neoclassical price theory or revealed preference theory? And how can these insights from psychology broaden our understanding of economic behavior? Psychology does have something to contribute to price theory, but neither psychology nor the other social sciences has come close to showing that economic models of human behavior must be jettisoned, or that economic models are inferior to alternative models drawn from the other social sciences.

1. Preference Exogeneity.—Both price theory and the theory of revealed preference take people's choices at face value, without characterizing them as either "rational" or "irrational." On matters of taste, as George Stigler and Gary Becker once noted, the economist generally assumes *de gustibus non est disputandum.*[104] As early as 1925, Jacob Viner observed that the criticism that utility theory was based on an obsolete psychology of value was quite irrelevant to most of the uses to which the theory was put. First, Viner said, the historical development of price theory suggested that it was not based on any kind of psychology, obsolete or current. Second, the economics of marginalism made no assumptions about the underlying rationality of consumer preferences, except perhaps one rather weak one: "All that the price-economist need assume with respect to an individual's desires is that they vary in intensity and that the desire for a further unit of a good diminishes with the increase in the number of units already acquired."[105]

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[102] *See, e.g.*, papers collected in THE QUALITY OF LIFE, (Alexander Szalai & Frank M. Andrews eds., 1980).

[103] *See* HERBERT A. SIMON, MODELS OF MAN: SOCIAL AND RATIONAL: MATHEMATICAL ESSAYS ON RATIONAL HUMAN BEHAVIOR IN A SOCIAL SETTING (1957).

[104] George J. Stigler & Gary S. Becker, *De gustibus non est disputandum*, 67 AM. ECON. REV. 76, 76 (1977).

[105] Jacob Viner, *The Utility Concept in Value Theory and Its Critics*, 33 J. POL. ECON. 369, 377 (1925). He might have added that the economist generally assumes that an individual's preferences are transitive, or consistent.

Some people might have such an insatiable desire for something that they will give up everything else to have more. But such people are so exceptional that they do not affect the economist's ability to model market behavior. The real premise of those who want a more sophisticated psychology, Viner suggested, was that economics should have a "theory of value which will not limit itself to a static or instantaneous flashlight analysis of the value-determination process, but which will delve into the origin and growth of the wants and desires which lead to the existence of exchange values."[106] This inquiry, although quite legitimate and important, is not part of price theory.

The neoclassical economist generally treats human preferences as "exogenous"—that is, determined entirely outside the relevant model. As von Neumann and Morgenstern said in 1944, the measurement of utility "must ultimately be based on some immediate sensation, which cannot possibly and certainly need not be analyzed any further." Economics is concerned only with outward manifestation of the "immediate sensation of preference."[107] In fact, rationality as an *empirical* assumption adds very little to models of price theory. Perfect rationality (coupled with biological similarity) might imply identicality of preference over a wide range, and if that were true there would be less room for many forms of market exchange. Instead, people have different preferences, and it is that difference which drives the basic model of price theory rather than any particular assumption about the content of human rationality.[108]

A theory that accepts unique individual preferences as given provides little basis for criticizing human behavior in a particular situation as irrational, except perhaps in the limited sense of pointing out inconsistencies. Criticism requires one to get behind the preferences, which the theory forbids us to do. Economics' so-called "rationalistic psychology" amounts to little more than the twin hypotheses that (1) people choose what they want (whatever that may be), and (2) they do this more or less consistently. For example, an assumption absolutely essential to all forms of economic model building is that an exchange makes both participants better off. But determining directly whether people are subjectively "better off" is impossible. How do we really know that John will exchange X for Y only if John is better off as a result? We cannot measure preference or satisfaction directly, but only the observed transaction. From this point, economics makes judgments about what maximizes efficiency, which is predicated to be the aggregate value of group preferences. For example, the notion of

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106 *Id.* at 386.

107 VON NEUMANN & MORGENSTERN, *supra* note 14, at 16.

108 *See* Kenneth J. Arrow, *Rationality of Self and Others in an Economic System*, 59 J. BUS. S385, S385-87 (1986); Jack Hirshleifer, *The Expanding Domain of Economics*, 75 AM. ECON. REV. 53, 59 (Supp. 1985).

an "equilibrium" rests on the proposition that people will continue to trade as long as trades are mutually beneficial to the participants. What is "mutually beneficial" is *defined* by the fact that the trade is observed. In short, economics does not assume that people act "rationally" in any subjective sense independent of the trade itself—the term "rationality" in most of neoclassical economics is purely a convention.

People's preferences are sometimes *irrational* in the sense that they are not mathematically consistent with other preferences or perhaps in the weaker sense that they simply do not seem intelligent in the light of the information that people have at the time they make a choice.[109] For example, people discount remote risks in irrational ways.[110] They may prefer a one in a million chance of winning a million dollars to a certain ten dollars, even though they are generally quite risk averse. Their reservation price, or the least they are willing to accept, when they sell something may be considerably more than the maximum they are willing to pay when they buy the same thing.[111] People may also have a rationality that is limited, or "bounded," in some important sense.[112] As a result, their decisions, although perhaps rational when measured against the information they have, may not be rational when measured against the assumption of perfect information. This suggests that economic analysis which merely assumes people have perfect information about legal rules will be led astray; many empirical studies have indicated that people are uninformed about legal rules.[113] People and firms may use nonlegal norms to guide their behavior, whether or not they know what the true legal

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109 For thoughtful analytic work in this area, see RATIONAL CHOICE: THE CONTRAST BETWEEN ECONOMICS AND PSYCHOLOGY (Robin M. Hogarth and Melvin W. Reder eds., 1987) and the excellent review article by Vernon L. Smith, *Rational Choice: The Contrast Between Economics and Psychology*, 99 J. POL. ECON. 877 (1991). Perhaps the greatest scholar of the relationship between economic and psychological rationality was Herbert A. Simon. *See* Herbert A. Simon, *A Behavioral Model of Rational Choice*, 69 Q.J. ECON. 99 (1955).

110 *See* Roger G. Noll & James E. Krier, *Some Implications of Cognitive Psychology for Risk Regulation*, 19 J. LEGAL STUD. 747, 771-72 (1990); *see also* Werner W. Pommerehne et al., *Economic Theory of Choice and the Preference Reversal Phenomenon: A Re-examination*, 72 AM. ECON. REV. 569 (1982); Robert J. Reilly, *Preference Reversal: Further Evidence and Some Suggested Modifications in Experimental Design*, 72 AM. ECON. REV. 576, 582 (1982); Paul Slovic & Sarah Lichtenstein, *Preference Reversals: A Broader Perspective*, 73 AM. ECON. REV. 596, 603 (1983); Amos Tversky & Daniel Kahneman, *Rational Choice and the Framing of Decisions*, 59 J. BUS. S251, S262-65 (1986). On people's irrational responses to risk, reflected in insurance markets, see H. KUNREUTHER ET AL., DISASTER INSURANCE PROTECTION: PUBLIC POLICY LESSONS (1978).

111 *See infra* text accompanying notes 134-44.

112 *See generally* HERBERT A. SIMON, MODELS OF BOUNDED RATIONALITY (1982); WILLIAMSON, *supra* note 57, at 44-46; Hirshleifer, *supra* note 108, at 61.

113 *See* Robert C. Ellickson, *A Critique of Economic and Sociological Theories of Social Control*, 16 J. LEGAL STUD. 67, 84-90 (1987).

rules are.[114] Other studies suggest that people commonly respond to incentives in perverse ways: economic incentives that would be expected to yield more of a certain kind of behavior frequently yield less.[115] Markets in which people have poor information about the desires of others seem, as an empirical matter, to reach equilibrium more quickly than markets in which information is good.[116] Still other studies suggest that a common assumption that markets tend to correct individual instances of irrationality is often not borne out.[117] Other studies suggest that people's reservation prices are determined in part by their notion of what is "fair" under the circumstances. For example, if I know that Firm *A* and Firm *B* have different costs, the most I am willing to pay for a good at Firm *A* may be different from what I am willing to pay at Firm *B*.[118] Such a finding, should it prove robust, could complicate the neoclassical competition model. Even market competition might not yield efficiency if people respond to the inefficient firm by feeling sorry for it and simply paying more. Likewise, some studies suggest that people's risk preference structure is extremely complicated; for example, some maintain extremely conservative investment portfolios but prefer high risk hobbies such as skydiving.[119] This suggests that economic models assuming the same degree of risk aversion with respect to two or more different uncertainties oversimplify the structure of human preferences.

Any one of these observations can complicate economic analysis of law and seriously limit the use of economics to determine optimal policy.[120] Positive economic analysis of law may sometimes need an enriched model. But none of these anomalies indicates that the basic model does not work within the domain for which it was intended. Some of these problems are clearly addressable *within* the standard law and economics model. For example, the concept of bounded rationality and the observation that people's knowledge of the law is limited both suggest that there are "costs" to learning the law. People purchase knowledge of the law to the extent they perceive its benefits.

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114 *See, e.g.*, ELLICKSON, *supra* note 52, at chs. 1-6.

115 *See* Charles R. Plott, *Rational Choice in Experimental Markets*, 59 J. BUS, S301, S323-25 (1986).

116 Smith, *supra* note 89, at 161.

117 *E.g.*, John Haltiwanger & Michael Waldman, *Rational Expectations and the Limits of Rationality: An Analysis of Heterogeneity*, 75 AM. ECON. REV. 326, 336 (1985); Peter Knez et al., *Individual Rationality, Market Rationality and Value Estimation*, 75 AM. ECON. REV. 397 (1985); Thomas Russell & Richard Thaler, *The Relevance of Quasi-Rationality in Competitive Markets*, 75 AM. ECON. REV. 1071, 1080-81 (1985).

118 *See* R.H. Thaler, *Mental Accounting and Consumer Choice*, 4 MARKETING SCI. 199 (1985); *see also* Daniel Kahneman et al., *Fairness and the Assumptions of Economics*, 59 J. BUS. S285, S287-88 (1986).

119 Darla A. Evans et al., *The Relationship Between Risk-Return Preference and Knowledge in Experimental Financial Markets*, 18 J. BEHAV. ECON. 19, 19 (1989).

120 *See* Noll & Krier, *supra* note 110, at 777-79.

They will also purchase more knowledge when its price is lower, and the simplicity and clarity of legal rules is simply a price reduction.

Other cases suggest the need for more complexity in economic models. Consider, for example, the social group that ignores legal rules even though the rules are known, as cattle ranchers commonly do when they confront the trespassing cattle of their neighbors.[121] Ranchers often sustain the damage themselves, even though they have a legal right to compensation. Perhaps an economic understanding of such behavior requires deeper insights into the working of the human mind. But it is equally plausible to assume that the members of the society have implicitly "contracted around" a particular legal rule. The use of legal machinery has a "cost" that is not fully captured by the dollar cost of using the legal institutions themselves. Rancher *A* maximizes his total utility, of which wealth is only a part. His ability to get along with his neighbors, with whom he has ongoing economic and noneconomic relationships, is just as important. Indeed, Rancher *A* knows that the next time the tables will likely be turned, and his cow will be the trespasser. A better way to characterize this behavior is as quasi-contractual: Rancher *A*, Rancher *B*, and others in the community have tacitly agreed with each other not to use the legal system, but to respond in a particular nonlegal way, as long as no particular offender becomes too egregious. To be sure, one might wish to use a different social science, in this case sociology, to evaluate this microsocial "compact." But it can probably be accounted for rather fully in traditional economic terms.

Other social sciences are also driven by rational choice models. For example, psychology uses a positive theory of rational choice to explain certain kinds of human and animal behavior and a normative theory to explain certain kinds of deviance. The psychologist, just as the economist, uses rational choice theory to establish a "link" between observed response and assumed motive: humans and other animals are assumed to maximize their perceived utility, given the preferences and perceptions they happen to have. As a result, one can infer something about motive by looking at action. In this sense the "revealed preference" of the psychologist is not very different from that of the economist—both presume that people act in order to satisfy certain perceived needs.[122] To be sure, there is some evidence that people do not always act rationally to maximize their utility. But critiques drawn from such evidence have their impact mostly at the margins; they do not undermine the basic story.

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121 ELLICKSON, *supra* note 52, at chs. 1,2.

122 *See* ROBYN M. DAWES, RATIONAL CHOICE IN AN UNCERTAIN WORLD 154-56 (1988); R.J. Hernstein, *Rational Choice Theory*, 45 AM. PSYCHOL. 356, 356 (1990). In political science, see CHARLES MURRAY, IN PURSUIT OF HAPPINESS AND GOOD GOVERNMENT (1988).

2. Endogenous Preferences.—As noted above, neoclassical economics generally regards preferences as exogenous—they are simply accepted as given and are presumed not to be affected by the economic system itself. The vast majority of social scientists would disagree with such a presumption. Indeed, the source of preference is an important element in psychology, sociology, communication studies, anthropology, and elsewhere. These disciplines assume that evolutionary development, culture, and experience produce, as well as reflect, human preference. Tastes and preferences are affected by what is available and by what people experience around them. As a result, preferences are endogenous, formed to an extent within the economic system itself.

Most economists would not disagree. They simply place inquiries into the source of preference outside the domain of their science and thus devote little attention to the development of models based on endogenous preferences. The little modeling that has been done suggests that markets with endogenous preferences reach equilibrium, and if the markets are competitive these equilibria are Pareto efficient. However, these models also suggest that the welfare losses from imperfections are much greater under an assumption of endogenous preferences than under the standard assumption of exogeneity.[123] As a result, such models accommodate more governmental planning than do traditional neoclassical models.

But, for the legal policymaker, inquiry into the relationship between preference endogeneity and economics is probably premature.[124] Economists themselves need to wrestle with that problem. Rather, the narrowing of economics' domain so as to exclude endogenous preferences means that, *if* the source of preference is relevant to determinations of well-being, the policymaker must obtain his data and method from a source other than economics.

3. Preference Endogeneity and Profit Maximization.—The neoclassical model of the rational person with purely exogenous preferences becomes more strained when the actors are firms rather than individuals, and the model is extended from individual utility maximization to firm profit maximization. The reason for the strain is clear. First, even in firms, the decision makers are people, and people maximize their own utility, not the firm's profits. As a result, managers' decisions are not reasonably calculated to maximize firm profits quite as often as the neoclassical model suggests.

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123 *See, e.g.*, Herbert Gintis, *Welfare Criteria with Endogenous Preferences: The Economics of Education*, 15 INT'L ECON. REV. 415, 422-23 (1974). For an extended model based on endogenous preferences, see ALBERT & HAHNEL, *supra* note 42, at 141-202.

124 For one preliminary explanation, see Cass R. Sunstein, *Endogenous Preferences, Environmental Law*, 22 J. LEGAL STUD. 217 (1993).

Second, an important difference between the concepts of utility maximization and profit maximization makes the other social sciences, particularly psychology, more relevant. The goal of profit maximization imputes *content* to the concept of rationality, as the concept of utility maximization does not. To state this another way, the business firm's "preferences" are endogenous in the sense that they are dictated by the technological and market circumstances in which the firm finds itself. One can quite frequently observe that a particular firm's practice appears not to maximize profits; we cannot generally observe that a particular individual's practices do not maximize utility unless two preferences are logically inconsistent with each other. The maxim *de gustibus non est disputandum*, which applies quite robustly to utility, does not apply to profits, because the outsider can observe the firm's behavior and make substantive judgments about whether its activities are reasonably calculated to maximize profits, which are objectively defined as the difference between revenue and costs.

Once preference is given a content, a social science such as psychology has much more to contribute to economic analysis, for the content of preference is eminently a psychological concern. This has an important corollary: to the extent we view people as productive "firms," we can make much more categorical, objective judgments about the content of human welfare. Just as with the theory of the business firm, we can infer the maximizing policy by studying the objective characteristics of the actor and the environment in which he operates. The theory of human capital does precisely this.[125] Profit-maximization models become relevant to questions about individual value when we speak of human capital, which regards the individual as a producer rather than a consumer, and his utility function as a production function. The human capital model enables us to compare one individual's output with that of others and make substantive judgments about its quality and amount. It also enables us to draw inferences from the environment and the abilities of the organism. That model opens a much wider door for the other social sciences and implicitly invites economists as economists to reconsider the objective welfare judgment.

But even when we redefine welfare in terms of productivity, as neoclassical theory of the firm does, economics remains dominant as an explanatory science. First, the question of how profit maximization occurs is eminently and purely an economic question. Even the question why profit maximization might fail to occur has economic answers. For example, if managers are rewarded on the basis of the market share or gross revenue their firm achieves, an economic model might predict that the firm will maximize output (up to some point)

[125] *See infra* text accompanying notes 197-206.

rather than profit. But the general failure of firms to maximize profits may indeed require a deeper study of why profit maximization does not capture all the motives of a firm's managers. This requires consideration of how motives are formed and why people choose the alternatives they do, rather than simple acceptance of motives as given. These questions often lay outside the bounds of economics.

4. Relevance for Legal Policy.—That some nontrivial part of people's preferences is a product of their environment, rather than logically prior to all experience, seems so obvious that it is not worth debating. But the policymaker must also consider why neoclassical economic theory is generally opposed to the very idea. The economist's commitment to exogeneity of individual preferences (as opposed to the "preferences" of the firm) is purely formal and definitional, driven mainly by a theory that the domain of economics is the study of how individuals and societies maximize their utility given the preferences they have. When the inquiry is bounded in this fashion, preferences become the logical starting point, and one does not look behind them.

But such a definition of the domain of economics does not mean that looking behind preferences to their source is an illegitimate inquiry, unscientific, or somehow outside the boundaries of rational policy determination altogether. It suggests only that economics under one particular definition of its own domain is not concerned about such questions. A broader conception of economics might include them, and a legal policymaker should feel free to consider the source of preference even if this question is not strictly speaking economic.

Once the concern of legal policy moves beyond facilitating markets to questions about human well-being, the role of preference endogeneity becomes much more prominent. Similarity of environment can yield similarity of preferences. One can thus infer preferences from observations of the environment itself. This concept is meaningful in both a gross, or biological, sense and a more refined, or cultural, sense. In the gross sense, all human individuals are biological organisms of the same species and the product of the same long evolutionary development. All have developed many preferences in common. All presumably feel pain when they are hungry and discomfort when they are not sheltered. The list of basic survival needs is amazingly common from one person to another. Only when one steps beyond this list do preferences tend to become more individualized. That leads to the commonality of preferences in a more refined sense. Culture and economic development tend to divide people into groups having different preferences, but the preferences within each group are similar. People from hot climates in technologically advanced countries acquire a taste for air conditioning, while those in develop-

ing countries do not. People from different cultures acquire different tastes for food, shelter, entertainment, education, and other aspects of lifestyle.

The assumption that preferences are endogenous also suggests how preferences can be measured by an external observer. Since preferences are formed by environments, environments may serve as indicators of what preferences presumptively are. For example, working indoor plumbing becomes one of the requirements of habitability for urban apartment houses, not merely because it is an idiosyncratic taste of the judge or legislator, or because it is essential for human survival, but because our technologically advanced environment has so affected our tastes that we consider it a necessity rather than an option. A different culture might view the matter differently.

Legislative bodies infer presumed preferences from the environment all the time. They cannot avoid it. But formal economic models of legislative behavior such as Arrow's Theorem often ignore the source of such inferences or regard them as illegitimate. Nonetheless, preference endogeneity permits the legal policymaker to look beyond economics in constructing the "utility curves" of her constituency. In this way, the presumption of preference endogeneity facilitates the making of objective welfare judgments. To be sure, environments might affect preference in absolutely random ways that cannot be modeled. In that case, an assumption of endogeneity of preferences will add little to one's ability to make judgments about well-being. But there is little evidence of this. If there are predictable relationships between human experience and human taste, taking preference endogeneity into account presents a fruitful avenue of inquiry.

C. Comparison and the Formation of Preference

One of the biggest single failures of welfare economics as a policy tool is its refusal to consider that equality has a welfare content. Neoclassical law and economics is subject to the same criticism. When people assess their well-being, they compare themselves with others with whom they feel similarly situated.[126] Women identify how well off they are by comparing themselves with men;[127] members of minor-

[126] *See, e.g.*, HARVEY LEIBENSTEIN, BEYOND ECONOMIC MAN *passim* (1976); DUNCAN MACRAE, JR., POLICY INDICATORS 219-49 (1985); SOCIAL COMPARISON PROCESSES (James M. Suls & Ronald L. Miller eds., 1977); Richard P. Abeles, *Relative Deprivation, Rising Expectations and Black Militancy*, 32 J. SOC. ISSUES 119, 133-36 (1976); Peter H. Reingen et al., *Brand Congruence in Interpersonal Relations: A Social Network Analysis*, 11 J. CONSUMER RES. 771 (1984). *See generally* RELATIVE DEPRIVATION AND SOCIAL COMPARISON (James M. Olson et al. eds., 1986); WALSTER ET AL., *supra* note 100.

[127] FAYE CROSBY, RELATIVE DEPRIVATION AND WORKING WOMEN (1982).

ity races compare themselves with whites.[128] There is good evidence that the satisfaction a worker gets from his wage is a function not only of its absolute size, but also of the worker's perception whether he is paid fairly vis-a-vis others.[129] Indeed, people seem more concerned with the "fairness" of outcomes than with their absolute value.[130]

The entire notion that equality is part of well-being requires the legal policymaker to look beyond how someone ranks her desires given her existing purchasing power. For example, a large area of social psychology that the legal policymaker cannot easily ignore is the subject of "relative deprivation." The most important general finding is that when people assess how well off they are, relative measures may be more important than absolute measures. People place a strong positive value on assurances that others within a comparison group will be treated similarly to themselves.[131] For example, a woman earning $10,000 in a job where men doing the same work also earn $10,000 is likely to feel better about her position in life than a woman earning $11,000 while men doing the same work earn $15,000.

A welfare economist relying on revealed market preference would almost surely conclude that the woman earning the $11,000 is better off; she can make purchases that the woman earning $10,000 cannot. But speaking in economic terms, the relative deprivation studies suggest that subjectively perceived well-being, or utility, is not a monotonic (constantly increasing) function of the amount of wealth, goods, or services that a person has, which welfare economics generally presumes. Rather, it is a product of two variables that can move in opposite directions. One variable is the absolute amount of such entitlements; the other is the amount relative to that held by others with whom one compares. One whose absolute position improves while his relative position worsens might actually experience a decline in well-being.

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128 Faye Crosby & A. Miren Gonzalez-Intal, *Relative Deprivation and Equity Theories: Felt Injustice and the Undeserved Benefits of Others*, *in* THE SENSE OF INJUSTICE 141, 142-45 (Robert Folger ed., 1984).

129 J.L. BAXTER, SOCIAL AND PSYCHOLOGICAL FOUNDATIONS OF ECONOMIC ANALYSIS 213, 220-21 (1988). Some studies also suggest that workers who feel they are being treated fairly perform better than those who feel otherwise. Jerald Greenberg, *Equity and Workplace Status: A Field Experiment*, 73 J. APPLIED PSYCHOL. 606, 611-12 (1988); *see generally* EQUITY AND JUSTICE IN SOCIAL BEHAVIOR (Jerald Greenberg & Ronald L. Cohen eds., 1982).

130 George F. Loewenstein et al., *Social Utility and Decision Making in Interpersonal Contexts*, 57 J. PERS. & SOC. PSYCHOL. 426, 432 (1989).

131 The now classic study is S. A. STOUFFER ET AL., THE AMERICAN SOLDIER: ADJUSTMENT DURING ARMY LIFE (1949). *See also* CROSBY, *supra* note 127; Marty Bernstein & Faye Crosby, *An Empirical Examination of Relative Deprivation Theory*, 16 J. EXPERIMENTAL SOC. PSYCHOL. 442 (1980); George R. Goethals & M.P. Zanna, *The Role of Social Comparison in Choice Shifts*, 37 J. PERS. & SOC. PSYCHOL. 1469 (1979); James M. Olson & Michael Ross, *Perceived Qualifications, Resource Abundance, and Resentment About Deprivation*, 20 J. EXPERIMENTAL SOC. PSYCHOL. 425 (1984).

Such observations are quite troublesome for any theory of welfare based on revealed preference in economic markets, where preferences are presumed to be exogenous. First, the studies suggest that the whole notion of *individual* preference as the near exclusive determinant of well-being is wide of the mark.[132] Second, they show that the classical view that welfare and equity pull against each other lacks empirical foundation as long as people as a group value equity by any amount greater than zero. In that case, more equity is just as likely to produce more well-being.

I believe welfare economics is mistaken not to take the concept of relative deprivation more seriously. But I make only the narrower argument that, whether or not welfare economics can ignore relative deprivation, the legal policymaker cannot. If economic methodologies do not permit the legal policymaker to address questions about relative deprivation, then the legal policymaker must turn to an alternative methodology that does.[133]

D. The Offer-Ask Disparity and Its Implications

The usefulness of preference-based legal policy is limited in many areas by the so-called "offer-ask" disparity, or "endowment effect,"[134] which is extremely troublesome for neoclassical economic theories of

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132 *See* McAdams, *supra* note 24.

133 The relative deprivation literature may explain some business phenomena that seem inconsistent with most economic models—for example, the widespread practice of "pay secrecy" in business firms. Most employers do not tell employees the salaries that fellow employees are earning. In many firms people are not encouraged to speak to one another about their respective salaries, and some employers even forbid them from doing so. Andre DeCarufel, *Pay Secrecy, Social Comparison and Relative Deprivation in Organizations*, *in* RELATIVE DEPRIVATION AND SOCIAL COMPARISON, *supra* note 126 at 181, 188.

A profit-maximizing firm would reward an employee's diligence or aggressiveness or punish shirking by adjusting pay. But such rewards are most effective if they are communicated to fellow employees, because fellow employees will be able to see the relationship between hard work and compensation. Why, then, would a presumably profit-maximizing business firm suppress employee knowledge about one another's pay? Probably because any gains in employee incentive that accrued from communicating employees' salaries to one another would be more than offset by the losses that would come from the relative deprivation that employees would feel. If the system for rewarding employees is less than perfect, and if information about the reasoning behind specific rewards is imperfectly communicated, there will be many people who feel that they deserve more simply because someone else with equal seniority or the same position is getting more. Such feelings are just as likely to discourage hard work as to encourage it.

Likewise, the psychology of relative deprivation has explained a phenomenon observed at least since Keynes, but not easily explained away in the economic literature: wage "stickiness." Although wages go up in times of economic growth, they fall much more slowly than prices in times of recession. The psychological literature suggests that, just as the firm's managers earn more than the wage earners, because they bear the responsibility of the firm's decision making, labor's expectation is that managers will cut their own wages first when times are bad. BAXTER, *supra* note 129, at 220-21.

134 Actually, the endowment effect is one particular explanation for the offer-ask disparity—when people view situations from their current point of view, they place extra value on things

welfare. Problematically for preference-based policy, the offer-ask disparity has proven to be surprisingly tenacious, surviving repeated tests of many varieties and defeating every explanation offered to trivialize them or minimize the consequences.[135]

The offer-ask disparity is an empirical observation that, for a wide range of goods, people's willingness to pay (WP) is substantially less than their willingness to accept (WA).[136] If the offer-ask disparity is robust, certain fundamentals of neoclassical welfare economics must simply be rewritten. For example, one may no longer be able to speak of indifference curves in many situations. If people's preferred rate of substitution when exchanging good *A* for good *B* is different, depending on whether they are going from *A* to *B* or from *B* to *A*, no single indifference curve for those two goods can be drawn.[137] Likewise, if the offer-ask disparity is robust, the invariance thesis of the Coase Theorem can no longer be proven, nor can at least one variation of the efficiency thesis.[138]

Briefly, the Coase Theorem says that in the absence of transaction costs, two parties will solve a private legal dispute by bargaining their way to a solution that is both (1) efficient and (2) invariant as to the underlying legal rule. For example, if the polluting smokestack costs $1000 to fix but does $600 damage to the single neighboring landowner, the two owners will always bargain their way to a solution that (1) is Pareto efficient or joint maximizing and (2) allows the smokestack to continue to operate, whether or not the law recognizes it as a private nuisance. If the smokestack is enjoinable as a nuisance, its operator will pay the landowner a sum between $600 and $1000 for the right to continue operating. If it is not a nuisance, the landowner will not be able to pay the smokestack enough to stop it from operating.

But suppose the landowner is subject to a substantial offer-ask disparity. He would be willing to pay up to $600 to avoid the smoke-

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which they already have, or with which they are endowed. *See* Richard Thaler, *Toward a Positive Theory of Consumer Choice*, 1 J. ECON. BEHAV. & ORGANIZATION 39, 44 (1980).

135 *See generally* Elizabeth Hoffman & Matthew L. Spitzer, *Willingness to Pay vs. Willingness to Accept: Legal and Economic Implications*, 71 WASH. U. L.Q. 59 (1993) (presenting, organizing, and criticizing evidence on the "basic independence" assumption, that economic agents evaluate commodities independently of whether the agents own those commodities).

136 *See* Rebecca Boyce et al., *An Experimental Examination of Intrinsic Values as a Source of the WTA-WTP Disparity*, 82 AM. ECON. REV. 1366 (1992); Hoffman & Spitzer, *supra* note 135, at 59-60; Hovenkamp, *Endowment Effect*, *supra* note 91, at 225-26; W. FISCHEL, THE OFFER/ASK DISPARITY AND JUST COMPENSATION FOR TAKINGS (Dartmouth College Economics Dept. Working Paper, 1994);.

137 Jack Knetsch, *The Endowment Effect and Evidence of Nonreversible Indifference Curves*, 79 AM. ECON. REV. 1277, 1282-83 (1989).

138 *See generally* Herbert Hovenkamp, *Marginal Utility and the Coase Theorem*, 75 CORNELL L. REV. 783 (1990); Daniel Kahneman et al., *Experimental Tests of the Endowment Effect and the Coase Theorem*, 98 J. POL. ECON. 1325 (1990).

stack damage, but if he already had the right under nuisance law to enjoin the smokestack, he would not give up the right for less than $1200. The right to the smokestack owner is worth $1000 in either direction, since it is a business firm. For a firm that maximizes profits rather than utility, the offer-ask disparity presumably does not apply.[139]

In this case, the invariance thesis of the Coase Theorem will not be true. If the right is initially assigned to the smokestack owner, the smokestack will operate. The landowner is willing to pay $600 for a shutdown, but the smokestack owner will insist on $1000. By contrast, if the right is assigned to the landowner, the smokestack will not operate. The smokestack owner would be willing to pay $1000 for the right to pollute, but the landowner will insist on $1200.

Whether the offer-ask disparity explodes the efficiency thesis of the Coase Theorem depends on which definition of efficiency we use. Both initial assignments in the above illustration are Pareto efficient, in the sense that any re-allocation of the right to pollute will hurt at least one of the two participants. But the Coase Theorem is generally understood to make the stronger claim that the outcome is not merely Pareto efficient, but is also joint maximizing. Now we have a problem, because we have to decide which of the two values the landowner places on the right is the correct one for measuring wealth, $600 measured by WP or $1200 by WA. The correct solution should be the higher one. That is, under revealed preference theory we accept *X*'s unwillingness to accept $1000 for his used car as evidence that he values it by at least $1000, and willingness to accept is always at least as high as willingness to pay.[140] In that case, however, joint wealth is $1000 if the right to pollute is given to the smokestack owner (the smokestack owner gets the right, worth $1000 to him, and the landowner gets nothing). Joint wealth is $1200 if the right is assigned initially to the landowner (the landowner's WA is $1200 and the smokestack owner gets nothing). So the parties will achieve the joint maximizing result only if the right is assigned initially to the land owner.

Importantly, none of this analysis is based on the presence of transaction costs or any other imperfection in the market that prevents the Coase Theorem from functioning smoothly. In the presence of an offer-ask disparity the invariance thesis of the Coase Theorem may not be true, and the efficiency thesis may not be either, if efficiency is measured in the strong sense of joint maximization rather than the weaker sense of Pareto superiority.

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139 *See* Hovenkamp, *Endowment Effect*, *supra* note 91, at 236-37.

140 *Id.* at 229.

A robust offer-ask disparity also entails that even perfectly competitive markets will not yield the efficient outcome if efficiency is measured by the commonly used law and economics criterion of wealth maximization, or cost-benefit analysis.[141] This suggests in turn that wealth would be maximized if entitlements were assigned initially to those who valued them most highly, but with value based on willingness to *accept* rather than willingness to pay.[142] This proposition could have a remarkable effect on public policy respecting the allocation of resources. If the value of life-saving heart surgery is determined by willingness to pay, it will tend to go to the wealthiest, for people can pay only to the extent of their resources. But if the value of the same surgery is based on the relative willingness of people to *receive* payment in exchange for giving it up, the link between value and existing wealth is no longer clear. The poor person may value the heart surgery as much as the wealthy person.

These are hardly trivial effects. They undermine a good deal of neoclassical welfare economics and neoclassical law and economics, including the typical story told under the Coase Theorem. Problematically, just as the offer-ask disparity explodes neoclassical economics' theory of value, it also makes determination of value immeasurably more difficult, perhaps even intractable, assuming that value can be determined only by observed preference. Indeed, one objection to the above observations is that, assuming the offer-ask disparity is robust, we *still* cannot justify policies that transfer wealth from the wealthy to the poor, for the offer-ask disparity leads to agnosticism about all welfare rules, those respecting how entitlements are initially assigned as well as those respecting how they are traded. In other words, even if the value of the heart surgery is based on willingness to accept, the wealthy may still place the higher value. We cannot know for sure.[143]

But once again, the critique applies only on the premise that the legal policymaker's welfare determinations must be based on revealed preference. Indeed, the critique exemplifies how tied economists are to revealed preference as the exclusive device for measuring welfare. A legal policymaker relying on objective welfare judgments would allocate expensive heart surgery on the basis of information other than either willingness to pay or willingness to accept.[144] This information

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[141] *Id.* at 230-31. However, competitive markets will probably continue to reach Pareto efficient equilibria. That is to say the First Welfare Theorem can be proven without assuming WTA = WTP.

[142] *Id.* at 233-34.

[143] *See* CHRISTOPHER CURRAN & PAUL RUBIN, THE ENDOWMENT EFFECT AND INCOME TRANSFERS (Emory University Law and Economics Working Paper No. 43, 1992).

[144] My original essay on legal policy and the endowment effect was quite clear about this, but Curran and Rubin misread it. *See* Hovenkamp, *Endowment Effect*, *supra* note 91, at 241-42; CURRAN & RUBIN, *supra* note 143, at 5-9; Fischel, *supra* note 136, at 18.

would include such things as the age of the patient (the longer the remaining life expectancy, the larger the imputed value of the surgery) and the patient's general health (someone who is going to die anyway in six months for other reasons cannot place as high a value on the surgery)—in other words, precisely the kinds of information that health care professionals frequently use in allocating scarce medical resources.

In sum, a robust offer-ask disparity greatly decreases our confidence in the efficiency of private markets generally, at least if our efficiency goals are stronger than Pareto efficiency. It also decreases our confidence in the Coase Theorem as a mechanism for predicting the consequences of private bargaining over legal entitlements. Even more fundamentally, it constrains the policymaker's ability to use measures of value based on either observed willingness to pay or observed willingness to accept. Rather, value must be determined by means other than the observation of preferences. This makes the objective welfare judgment an essential feature of policymaking—*even* policymaking driven by standard neoclassical concepts of allocative efficiency.

E. Preference and Paretianism in Public Choice Theory

This subsection argues that the use of preference in public choice theory is often inconsistent with both neoclassical economics and constitutional democratic theory. Further, the two branches of public choice theory use concepts of preference, or of the appropriate domain of preference, that are inconsistent with each other. No elaborate summary of the theory of public choice is given, but footnotes lead the reader to useful collateral sources.

Political markets, as distinct from private markets, are state-imposed mechanisms for allocating resources by means other than voluntary exchange. Legislative bodies, federal, state, and local regulatory agencies, courts, and the electoral process are all political markets in which government officials, elected or appointed, have something to sell, and various individuals and interest groups line up to buy. Decisions in these markets are made through the participation of voters and by legislative, executive, and judicial officials.

In private markets, decisions are made by unanimous consent. Exchanges are voluntary as between the parties to the transaction, although they may sometimes affect unwilling third parties. Political markets differ in this respect. Although various "background" decisions in political markets may theoretically be the product of unanimous consent by participants, individual transactions are not. They may be made over someone's vehement objection. Indeed, the most profitable winning coalition for a legislative body may be the one with the barest possible majority. For example, the winners from a tax-

and-transfer scheme to be established by majority vote will generally maximize their returns if the group of payers is as large as possible and the group of recipients as small as possible, provided that the group of recipients is large enough to win the vote.

Public choice theory studies political markets and the allocations of resources they produce. The economic literature on public choice has developed from two distinct origins. One is concerned primarily with the role of special interest groups in distorting the legislative process and is associated mainly with the pioneering work of James Buchanan and Gordon Tullock.[145] This line is sometimes described as the Virginia School. The second is based on Arrow's Impossibility Theorem and similar formal theorems about failure of equilibrium in voter decision making.[146]

Some people employ both lines of public choice argument as if they reinforce one another in establishing the inefficiency of legislative outcomes.[147] But the two schools are not merely different from each other. They have radically inconsistent views about the purpose and workings of democratic government.

The Virginia School has a libertarian bent and generally believes that government's only legitimate purpose is to correct market failure. The starting distribution of property rights is assumed to be part of the nature of things and logically prior to the function of government.[148] Given this constraint, welfare is maximized when markets are made competitive, but redistribution of wealth is not a permissible governmental activity. As a result, Virginia School public choice theory places a strong emphasis on unanimity. Theoretically, at least, legislative proposals that correct market failure ought to receive unanimous consent, since they can be structured in ways that leave all participants better off.[149]

The Virginia School approach also emphasizes that Pareto efficiency can be used as an Archimedean point from which legislation can be criticized. Deviation from the status quo is justified only if it produces all gainers and no losers. At the expense of some overgeneralization, the Chicago School literature on public choice tracks the Virginia School, although the ideological libertarianism is not as

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145 JAMES M. BUCHANAN & GORDON TULLOCK, THE CALCULUS OF CONSENT (1962).

146 ARROW, *supra* note 4, at 46-60.

147 *See, e.g.*, Frank H. Easterbrook, *Foreword: The Court and the Economic System*, 98 HARV. L. REV. 4, 45-58 (1984); Frank H. Easterbrook, *Ways of Criticizing the Court*, 95 HARV. L. REV. 802, 823 (1982).

148 *See, e.g.*, JAMES M. BUCHANAN, THE LIMITS OF LIBERTY 8-11 (1975); James M. Buchanan, *The Contractarian Logic of Classical Liberalism*, *in* LIBERTY, PROPERTY, AND THE FUTURE OF CONSTITUTIONAL DEVELOPMENT (Ellen F. Paul & Howard Dickman eds., 1990).

149 BUCHANAN, *supra* note 148, at 38-41. For a critique, arguing that even legislative solutions to clear market failures are subject to endless cycling, see Hovenkamp, *Arrow's Theorem*, *supra* note 16, at 970-73.

prominent, and potential Paretianism, or Kaldor-Hicks efficiency, is accepted more often as a substitute for Paretianism. Chicago School public choice literature generally follows the Virginia approach in evaluating legislation by the degree to which it produces economically efficient outcomes.[150]

The core of Virginia School public choice theory is the problem of interest groups. Groups that are small, single minded, and well-organized tend to convey their message more clearly than large interest groups with diverse agendas. The larger groups are plagued with "free-rider" problems. Each member knows there are plenty of others to make the case for legislation, which will benefit him whether or not he makes a contribution, so he tends to shirk. The consequence is legislation that often represents the interests of the few at the expense of the many.[151] This bias exists in a republican system of government, but generally not in a pure democracy where each person votes her own interest on each policy decision.

Although public choice has roots in neoclassical economics, the way it deals with preference is fundamentally different. In neoclassical economics, differential weighting of preferences is needed to make markets work—someone must be the highest bidder. By contrast, in public choice theory, preferences are treated as if they must all have the same weight—a conclusion compelled by the fact that each person gets one vote, and votes are counted equally. However, small, organized interest groups very likely have disproportionate influence on governmental process because their increased efforts reflect the fact that each member has more at stake.[152] In that case, inefficiency cannot be inferred from the fact that the group which commands the most votes loses. Public choice may be measuring no more than the fact

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150 For a good survey of the schools, see William C. Mitchell & Michael C. Munger, *Economic Models of Interest Groups: An Introductory Survey*, 35 AM. J. POL. SCI. 512, 519-36 (1991).

151 *See* BUCHANAN & TULLOCK, *supra* note 145, at 283-95. On public choice generally, see FARBER & FRICKEY, *supra* note 2; GORDON TULLOCK, ECONOMICS OF INCOME REDISTRIBUTION, 17-48 (1983); *see also* RUSSELL HARDIN, COLLECTIVE ACTION (1982); DENNIS C. MUELLER, PUBLIC CHOICE II (1989); MANCUR OLSON, THE LOGIC OF COLLECTIVE ACTION (2d ed. 1971); CASS R. SUNSTEIN, AFTER THE RIGHTS REVOLUTION (1990); Gary S. Becker, *Pressure Groups and Political Behavior*, *in* CAPITALISM AND DEMOCRACY 120 (Richard D. Coe & Charles K. Wilber eds., 1985); Gary S. Becker, *A Theory of Competition Among Pressure Groups for Political Influence*, 98 Q.J. ECON. 371 (1983).

The origins of public choice theory are far older than its protagonists acknowledge. *See* Henry C. Adams, *The Relation of the State to Industrial Action*, 1 PUB. AM. ECON. ASS'N 471 (1887) (describing regulatory capture); ARTHUR F. BENTLEY, THE PROCESS OF GOVERNMENT, A STUDY OF SOCIAL PRESSURES 258-59 (1908) (same). On theories of regulatory capture in the late nineteenth century, see HERBERT HOVENKAMP, ENTERPRISE AND AMERICAN LAW, 1836-1937 105-48 (1991).

152 *See* Einer R. Elhauge, *Does Interest Group Theory Justify More Intrusive Judicial Review?*, 101 YALE L.J. 31, 35-44 (1991).

that the members of small groups have stronger preferences than the members of the larger society.

Furthermore, the inefficiency of the legislation that results from this interest group campaign cannot necessarily be measured by cost-benefit analysis, which determines only whether the value that accrues to gainers, measured by willingness to pay, is less than the losses that accrue to losers.[153] That is not the measuring rod democratic markets use, since voting expresses voters' *utilities*, not their willingness to pay.[154]

In sum, much legislation may be inefficient, but it is not inefficient merely because (1) an interest group commanding only a minority of votes managed to get it passed, or (2) it fails to pass a cost-benefit test. Legislation could be efficient and flunk both of these tests. Unfortunately, the *true* test for measuring the efficiency of legislation—whether the utility gains outweigh the utility losses—requires cardinalization of utilities and interpersonal comparisons on a constant scale, something we cannot do. We must resort to criteria unrelated to observed preference.

By contrast to the Virginia School, Arrovian public choice theory refuses to recognize that people have antecedent rights to the existing distribution of resources. Arrovian theory begins with the Second Welfare Theorem. A competitive society in which everyone begins with equal resources will eventually trade to a Pareto efficient outcome. A society in which one person starts out with ninety percent of the wealth while others start out with the remaining ten percent will also trade to a Pareto efficient outcome, but it will likely be quite different from the outcome in the first society.

This is where Arrow's Impossibility Theorem becomes relevant. According to the Second Welfare Theorem, economic markets cannot rank alternative Pareto efficient states.[155] But perhaps democratic political institutions can. For example, we might wish to say that a Pareto efficient outcome favored by ninety percent of voters should be preferred to one favored by only ten percent. However, Arrow's Theorem shows that, in the absence of unanimity, democratic voting cannot create a stable ranking of outcomes in such a way that any particular outcome is the social choice.

Importantly, however, within the Arrovian framework no one has a natural right to any given distribution of wealth—indeed, Arrow's Range condition, one of the assumptions of the Impossibility Theo-

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153 *See* Richard A. Posner, *Theories of Economic Regulation*, 5 BELL J. ECON. & MGMT. SCI. 335 (1974).

154 *See generally* Hovenkamp, *Legislation*, *supra* note 2, at 81-85.

155 That is, under the Second Welfare Theorem alternative starting distributions in competitive markets yield alternative Pareto efficient equilibria, but none of these various equilibria is Pareto superior to the others. They are said to be Pareto noncomparable.

rem, supposes that voters' preferences may extend over all logically possible choices, including all possible alternative distributions of wealth.[156] This premise directly contradicts the Virginia School theory that the only appropriate economic role of government is the correction of market failures. Further, under Virginia theory, the only regulatory schemes that ought to be approved are those which receive unanimous consent, since optimal solutions to public goods problems and market failure benefit everyone.[157] Such arguments effectively permit one person to veto any legislative proposal and thus violate Arrow's Nondictatorship requirement.

Arrovian public choice does not fall into the Virginia and Chicago School trap of evaluating the efficiency of the resulting legislation by engaging in cost-benefit analysis. Arrow's Theorem assumes that voters vote their utility and not their wealth, and legislation that does not pass the cost-benefit test might still maximize utility. Rather, the theorem shows that voting itself, where all votes are counted equally, produces unstable results that can be defeated over and over again in an infinite set of cycles.

The Arrovian starting point is built on a much less metaphysical view of the structure of rights and the obligations of government. Under Arrovian theory, government must both correct market failures and make policy concerning the distribution of wealth, in at least some minimal sense. Indeed, the Virginia School idea that the "starting" distribution of wealth is a given has no fulcrum within economic science. This idea presumes some state of nature prior to the existence of government in which everyone has a given amount of resources. But if "ownership," "property," and "right to exclude" mean anything at all, it is as a result of policy.

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156 *See* Hovenkamp, *Rationality*, *supra* note 25, at 319-24. The assumptions of the theorem are:

(1) Unanimity. If one person prefers outcome *A* over outcome *B* and all other people either agree with that ranking or are indifferent, then society prefers outcome *A* over outcome *B*. This is simply a statement of the Pareto principle: a change is Pareto superior if at least one person is benefitted and no one is injured.

(2) Nondictatorship. No individual has a position such that if she prefers outcome *A* over outcome *B*, outcome *A* will be chosen, no matter what the preferences of others.

(3) Transitivity. Society's rankings of outcomes must be logically rational in the sense that if society prefers outcome *A* over *B* and *B* over *C*, it must also prefer *A* over *C*.

(4) Range. The social choice process must consider *all* relevant individual preferences, and not just some arbitrarily defined subset. For example, if possible choices include outcomes *A*, *B*, and *C*, the process may not arbitrarily drop *C* and force a decision between *A* and *B*. Further, all possible preference orderings of *A*, *B*, and *C* are permissible—for example, *B*, *C*, *A*; *C*, *A*, *B*; *A*, *C*, *B*, and so on.

(5) Independence of Irrelevant Alternatives. With respect to any vote currently on the agenda—for example, as between *A* and *B*—how the individual (or some other individual) would rank a different outcome, *C*, must be totally irrelevant to the particular vote at hand.

Arrow proved that if a society contained several voters, three or more options (outcomes) to be voted on, and no unanimity, no process could satisfy these conditions simultaneously.

157 *See* BUCHANAN, *supra* note 148, at 42-43.

If the only duty of government is to facilitate markets, as the Virginia School holds, voter participants have very few choices to make. Under normally accepted assumptions, each starting distribution of wealth will trade in a perfectly competitive market to a unique Pareto efficient outcome. A theory that accepts government intervention only to permit movement from the existing position to the Pareto optimal outcome predetermines most social choices. To be sure, there might be differences of opinion as to when market failure occurs or the best way to correct it. But assuming there is consensus about the basic system, the number of options to be voted on would be considerably constrained.[158] Any such constraint on possible voter choices violates the Range condition of Arrow's Theorem.

The Virginia School conception of democracy thus requires an extremely strong constitution and doctrine of judicial review. Judges must often intervene to upset the voters' choice, since that choice interferes with the established property or liberty rights of some citizens. By contrast, Arrovian democracy has a very minimal constitution, for anything that interferes with individual voters' expressed choices violates either the Range or Nondictatorship conditions. An Arrovian constitution does no more than upset governmental decisions that serve to limit voter choice—precisely the opposite of the Virginia School constitution.

Arrow's Range condition supposes that any transitive set of preferences may constitute an individual's preference ordering. That preference ordering may also constitute the social choice, if enough individuals prefer it. But in a constitutional democracy the state is not permitted to acknowledge certain kinds of preferences. Indeed, "constitutionalism," which refers to a democratic regime subject to certain externally imposed limits, is not merely inconsistent with Arrow's Range condition, it is also inconsistent with the Pareto principle, which defines efficiency for both political and private markets. When Arrow defined his conditions for democracy he could not have meant a constitutional democracy.

A constitutional democracy with a meaningful bill of rights places limits on the range of preferences that the state will recognize. For example, even if every citizen of Smallville is an evangelical Protestant who favors Bible reading in the public school, such Bible reading is forbidden by the federal constitution. Viewing Smallville as the relevant society (or public market), that outcome is not Pareto optimal. A rule permitting Bible reading in Smallville's public schools would make everyone there better off and no affected person worse off. To be sure, many outsiders would prefer that Smallville's children not

158 For a strong statement of this position, with respect to regulation, wealth redistribution, and the law of takings, see RICHARD A. EPSTEIN, TAKINGS, 4-5 (1985).

hear the Bible in public school, but these outsiders do not live in Smallville and do not send their children to school there.

By its nature, a bill of rights removes some kinds of preferences from society's consideration, while it raises others to a privileged level. Both of these results violate conditions of Arrow's theorem. "Invidious" preferences are preferences that one person holds about the welfare of a second person and that, if recognized, would make the second person worse off. For example, *A*, who is an atheist, may prefer that *B*, who is an evangelical, not be permitted to pray at night before *B* retires. Should *A*'s preference be entitled to consideration in a democratic society? If not, Arrow's Range condition has been violated. By contrast, "preferred" preferences are preferences that a person is entitled to assert even over the objection of all others. A good example is "*B* is entitled to pray in private before he retires at night no matter how many others prefer that *B* not be permitted to do so." A government that recognizes such a preference has violated Arrow's Nondictatorship assumption. In the United States, for example, *B*'s preference is entitled to prevail in spite of the fact that all others prefer to the contrary. With respect to this preference, *B* has become the dictator.

One can carry the constraints imposed by a bill of rights a step further. Not only is the recognition of such rights inconsistent with the preconditions of Arrow's Theorem, it is also inconsistent with Paretianism as a mechanism for evaluating the desirability of social outcomes. Further, one need not look at social welfare legislation to find inconsistencies between Paretianism and constitutionalism. They flow from the more libertarian concerns that a bill of rights has been classically held to express—concerns about freedom of religion, speech, and the press, freedom from race discrimination, and so on. In short, although Pareto efficiency based on preference and welfare liberalism may be inconsistent goals, Pareto efficiency is also inconsistent with laissez faire, or classical, liberalism of the kind defended by the nineteenth century political economists.

For example, suppose that a society consists of *W*, a white segregationist, and *B*, a black segregationist. The state must decide how to assign the rights to use a public park. There are four possibilities:

1 = *W* can go to the park, but *B* cannot
2 = *B* can go to the park, but *W* cannot
3 = both *W* and *B* can go to the park (that is, integrate the park)
4 = neither *W* nor *B* can go to the park (that is, close the park)

W and *B* rank their choices this way:

W: *1, 4, 3, 2*
B: *2, 4, 3, 1*

Each segregationist's first choice is to have the park open only to itself. Each person's last choice is to have the park open only to the

other. But if the park must be either integrated or open only to the other person, each person would prefer to see the park closed. Historically at least, such preferences were not uncommon, at least among white segregationists. For example, the city of Richmond, Virginia, closed its municipal swimming pools rather than integrating them,[159] and Prince Edward County closed its public schools entirely in response to the Supreme Court's 1954 and 1955 desegregation decrees.[160] Likewise, the Supreme Court once interpreted a will so as to close a privately-granted public park rather than integrate it as the law required.[161]

Options *1*, *2*, and *4* are all examples of preferences that we might wish a constitutional democracy to ignore. Both *1* and *2* express a preference that people be denied access to a public facility strictly on the basis of race. Preference *4* might be seen as even worse: the holder of preference *4* prefers that the park actually be closed before it be integrated.

Unfortunately, the rankings by *W* and *B* tell us that *1* (white only), *2* (black only), and *4* (close park) are all Pareto optimal outcomes. That is, if *1* were the status quo, a move to any other alternative would make *B* better off, but it would also make *W* worse off. Likewise, if *2* were the status quo, any move would injure *B*. If the status quo was *4*, no move could improve one person's situation without hurting that of the other.

This means that only *3* (integration) is a Pareto inferior choice. A move from *3* to *4* would improve the lot of both *W* and *B*. In short, a state's concern with constitutional rights might force a Pareto-inferior solution on its citizens simply because all other solutions are unacceptable as a matter of constitutional principle.[162]

In sum, so-called classical liberalism itself—the notion that people are entitled to assert certain "personal" preferences notwithstanding the objections of others—violates Arrow's Nondictatorship assumption by making a single individual's wish decisive. It also violates the Range condition, by regarding certain preferences as not entitled to consideration, and it violates the Pareto principle itself. The idea of a *constitutional* democracy with a bill of rights thus calls into question three of the five conditions Arrow thought were essential attributes of a democratic decision procedure.

The principal effect of both branches of public choice theory is to weaken the policymaker's confidence that individual preferences, as

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159 Palmer v. Thompson, 403 U.S. 217, 224-46 (1971).

160 Griffin v. County Sch. Bd., 377 U.S. 218, 229-32 (1964).

161 Evans v. Abney, 396 U.S. 435, 436-37 (1970).

162 *See* Amartya Sen, *The Impossibility of a Paretian Liberal*, 78 J. POL. ECON. 152, 156-57 (1970).

measured by the devices that we are capable of using, give a coherent guide to the formation of policy in a constitutional democracy.

F. Preference-Based Policy and the Distribution of Wealth: Hopeless Indeterminacy

1. Neoclassicism and Distribution.—The legal policymaker's principal concern is maximizing the well-being of his constituency. Maximization requires policies that encourage the optimal mixture of productivity and distribution of wealth. That is, well-being will increase when total social wealth increases, but it may also increase when existing social wealth is redistributed in some fashion.

Most libertarians, which include some economists, are hostile toward forced redistribution of wealth for noneconomic reasons. For example, they may believe that every person has a "natural" or other inherent right to the wealth he carries into the world or earns by his own labor.[163] *Within* neoclassical economics, however, hostility toward redistribution is contingent rather than essential. Historically, the hostility stems from three characteristics of redistribution: (1) redistribution reduces incentives to be productive by disaggregating wealth from productivity,[164] (2) the process of redistribution is both expensive and hard to control in a way that yields the results we want, and (3) there is no agreed upon way of ranking alternative distributions of wealth in societies where the total wealth is the same. As a result of (1) and (2), redistribution generally is thought to reduce social wealth as a whole. As a result of (3), there is no obvious way of concluding that a particular redistribution program has produced gains.

The following abstract propositions would seem to be true of any society that values total social wealth but views distributional questions from the neoclassical, or contingent, perspective rather than from a natural rights one. First, to the extent that a certain type of redistribution of wealth *increases* total social wealth, there should be a presumption favoring such redistribution. Second, if redistribution seems valuable on ethical or philosophical grounds and is costless to society, there is no inherent economic reason to regard it with hostility. Third, even redistribution that reduces total social wealth might be justifiable if it can be shown that the gains in well-being somehow outweigh the costs in lost incentives and operation of the redistribution process. Then, redistribution is a "good"—in this case, a public good—that must be purchased. Like any good, it has a price. If what

163 *See, e.g.*, EPSTEIN, *supra* note 158, at 5-6.

164 That is (1) it reduces the wealth that accrues from a given amount of productivity, because some will be taxed away and given to others, and (2) it increases the wealth of those who are not productive by making them the beneficiaries of redistribution.

the legal policymaker is maximizing is well-being, not wealth, he may then be willing to exchange a certain amount of wealth for well-being.

The question of incentive effects is fundamentally psychological—the measurement of human incentives requires the policymaker to say something about the shape of individual utility curves—and empirical—the conclusions must be generalized over large numbers. Further, wealth is only one of the things that affects people's incentives; many people work because they love their jobs or have nothing better to do. But if one could look at incentive effects that result only from the opportunity to earn wealth, one would find something resembling the Laffer Curve. That is, in a world in which one person earned everything and everyone else earned nothing and had no opportunity to earn, wealth would provide no incentive to productivity. At the opposite extreme, if everyone earned precisely the same, regardless of productivity, there would be no wealth-induced incentive to work harder. In between, where people share wealth, but only in some proportion to productivity, wealth creates an incentive to produce.

So income must be tied to one's work, and this necessarily dictates a certain amount of wealth inequality. The relevant question is how much inequality is needed for a society to attain the appropriate amount of incentives. The question is further complicated because the relation between incentives and income appears not to be monotonic:[165] at a certain point, maldistribution of the returns to work *reduces* incentives because the poorest people's resources are not sufficient for them to break into the system to begin with. A life of crime or welfare is better than the realistic work prospects before them.

Today it seems quite clear that the distribution of income levels in the United States is much more unequal than necessary to provide an adequate level of incentive, and indeed we are probably at a point where maldistribution provides a major disincentive for some social groups—in the process, making them costly social burdens on our society. In Japan, for example, the average CEO of a large firm earns about seventeen times as much as the average worker. In the United States, in 1980, that number was about forty-two, but by 1988 it had risen to more than ninety.[166] Indeed, no other developed democracy comes close to having our level of income maldistribution, and among developed democracies the United States has hardly been the leader in economic growth through the 1980s and early 1990s.

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[165] Neoclassicism often assumes that the relationship is monotonic, but if it is a Laffer Curve it cannot be.

[166] Stephanie Coontz, *On the Edge*, CHI. TRIB., Oct. 11, 1992 (Magazine), at 13, 18. *See also* ROBERT B. REICH, THE WORK OF NATIONS 196-207 (1991) (summarizing other data to the same effect).

The causes of economic growth are complex and multiple, and one should not draw too strong a conclusion from such data. But it seems beyond controversy that productivity rates equivalent to what we now have could probably be maintained with much more egalitarian distributions of after-tax income. Social well-being would rise in the process.

Many neoclassical economists believe that some redistribution is good on ethical grounds, but they are inclined to think that distributional questions lie outside the boundaries of their discipline except insofar as the questions involve the efficiency effects of particular redistribution programs. The result is that economists writing as economists have relatively little to say about redistribution.

But the legal policymaker cannot avoid questions of redistribution quite so easily. He is forced to one of two choices. First, he can follow the neoclassicists' lead and conclude that redistribution questions are outside the concern of law and economics. Alternatively, he might try to modify the discipline of law and economics to make it account for essentially redistributive concerns in a more realistic way.

I prefer to think of law and economics as doing the latter. But this move requires that law and economics itself admit certain concepts that have traditionally been identified with psychology or the other social sciences. Further, it requires considerable softening of the hostility toward interpersonal utility comparisons that is embedded within neoclassicism. Finally, and perhaps most importantly, it requires law and economics to divert some of its attention away from traditional private markets and toward the involuntary transfer of wealth. Private markets do not transfer wealth in systematic ways, because all exchanges are voluntary, and most people will not voluntarily agree to have their wealth reduced. The literature on public choice, which examines the role of political markets, is a step in the right direction. Involuntary wealth transfers are the stuff of political markets. To date, however, most of the public choice literature is concerned with the process and efficiency of political markets, not with substantive questions about the effects of particular legislative wealth transfers on social well-being measured by criteria other than willingness to pay.

Within the neoclassical model, it is commonly said, equity and Pareto efficiency are normative goals that must be traded against each other.[167] This does not necessarily mean that any state of affairs with more equity than another also contains less efficiency than the other. For example, cartels and monopolists may produce both allocative inefficiency and inequalities of wealth. A move from monopoly to competition could then increase both efficiency and equity.

[167] *See* Hovenkamp, *Positivism*, *supra* note 20, at 847-48.

Rather, the notion that equity and efficiency must be balanced against each other really means that economic welfare is maximized without regard for equity. Once Pareto efficiency is attained, if the resulting society wants more equity it can have more; but equity must then be purchased by a reduction in efficiency. For example, McCormick and Tollison begin their work on public choice with the premise that government can serve one of two functions: to correct market failures or to transfer wealth. The former they characterize as a positive sum game, the latter as a zero or negative sum game.[168]

This notion that economic welfare must be traded against equity, or that well-being is maximized without regard for equity, is one of the great *tours de force* of the right wing of the law and economics movement. The rhetoric has been so successful that even some liberal social scientists writing in support of the welfare state assume that such a tradeoff must be made. They have been relegated to arguing merely that the tradeoff is not all that expensive.[169]

Within this tradeoff paradigm, efficiency is often presented as a scientific concept. "Welfare" is identified with efficiency. Both efficiency and economic welfare refer to how big the pie is, but say nothing about how it is to be divided. In contrast to scientific efficiency, the economist describes a collection of subjective concepts of fairness.[170] Whenever the state intervenes in the market to achieve equity, some efficiency will be lost. When one adds the rhetoric of Chicago-style law and economics, legislative debates about equity always deteriorate into fights among interest groups for the biggest piece of the pie. The implications are obvious: one can have either scientific efficiency or a hodgepodge of inefficient distributive rules whose only explanations are purely political.[171]

Clearly, the legal policymaker must consider both efficiency and equity. But that they must be traded against each other is far from certain. Before the ordinalists convinced us that utility functions could not be quantified and compared interpersonally, economists such as Pigou and Marshall believed that more equality implied *more* economic welfare. Their belief flowed from the assumption that the marginal utility of a dollar in the hands of the poor was greater than the marginal utility of a dollar in the hands of the well off. One could increase economic welfare—the "aggregate sum of satisfaction," as

168 ROBERT E. MCCORMICK & ROBERT D. TOLLISON, POLITICIANS, LEGISLATION, AND THE ECONOMY (1981).

169 *See, e.g.*, ROBERT E. GOODIN, REASONS FOR WELFARE 229-56 (1988).

170 For a good analysis of the basic paradigm by one of its critics, see ARTHUR M. OKUN, EQUALITY AND EFFICIENCY: THE BIG TRADEOFF (1975).

171 Hovenkamp, *Positivism*, *supra* note 20, at 848.

Pigou put it—by transferring wealth from the rich to the poor, provided they were people of similar temperament.[172]

For those who believe that interpersonal comparisons of utility are strictly impossible, this argument is unsound. But the substitutes are equally unsound. For example, the common assumption required by alternative measures of efficiency, such as cost-benefit analysis, that a dollar produces the same marginal utility in everyone, is equally unjustified and quite contrary to the subjective experience of most of us.

Alternative assumptions yield radically different pictures of the efficiency-equity tradeoff. For example, the legal policymaker who assumes an inverse correlation between wealth and marginal utility—that the person with twice as much wealth as another derives half as much marginal utility from an additional dollar—would be making an assumption that is no less supportable than the assumption of universal constancy. The assumption is probably more consistent with our subjective experience of declining marginal utility of wealth. But under such an assumption, any notion that efficiency and equity must be traded against each other vanishes.

Consider the efficiency consequences of a pure wealth transfer within a Pareto optimal equilibrium in which wealth is very lopsided. Suppose this society contained ten wealthy persons with $100 each and ten impoverished persons with nothing, and we transferred $50 from each of the wealthy to each of the poor. Kaldor-Hicks, or cost-benefit analysis, would proclaim this transfer a wash, for if the transfer scheme was costless and we compensated each of the wealthy for his loss, society would be no better off than before.

We have little scientific information about Kaldor-Hicks' first premise, that different individuals derive the same utility from a given amount of income. We do have some information about the second premise—namely, that the marginal utility of income is constant—but the information suggests that the premise is wrong. By introspection and observation of the behavior of others (such as their purchase of insurance),[173] we easily conclude that the marginal utility of income is not constant, but declines as one has more of it. If one were to indulge presumptions much more consistent with the evidence—namely, (1) that each individual derives the same utility from his or her first dollar in income and (2) that the marginal utility of income

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172 PIGOU, *supra* note 96, at 89. *See also* Hovenkamp, *First Great Law & Economics Movement*, *supra* note 26, at 1038-47.

173 That is, the expected cost of a catastrophic loss is always less than the cost of the insurance policy that covers it, unless (1) the insurance market is perfectly competitive, and (2) the transaction costs of writing and selling the policy are zero. But people purchase insurance because the $100 price of the policy comes out of marginal wealth while the $100,000 loss, if it should occur, will dig into inframarginal wealth, which they value much more highly.

declines, even if slightly—it can easily be shown that utility is maximized when wealth is equalized. Neoclassical economists knew this in the nineteenth century.

To take a simple example,[174] assume the utility of the first dollar to every person is U, of the second dollar, $U - x$, of the third dollar, $U - 2x$, and so on, where x is a positive number, no matter how small. Assume that each person has \$5, which gives utility equal to $5U - 10x$—that is, $U + U - x + U - 2x + U - 3x + U - 4x$. At that point, if an additional dollar becomes available and is given to A, he will derive $U - 5x$ utility from it. A now has \$6 and $6U - 15x$ utility; the other members of society continue to have \$5. Now suppose yet another dollar becomes available. That dollar will give any person other than A $U - 5x$ utility, but it will give A $U - 6x$ utility. If one of the members of this society were impoverished, having only \$1, that additional dollar would give that person $U - x$ utility. The more dollars a person already has, the less utility he will obtain from acquisition of an additional dollar.

2. Redistribution and the Failure of Liberal Political Theory: The Veil of Ignorance.—When one moves from neoclassical economics to liberal political theory, which is also based on individual preference, arguments for and against the redistribution of wealth fare no better. In all likelihood, a determinative theory about the optimal distribution of wealth cannot be derived from the observed preferences of societies' members.

The most influential arguments relating preference to the distribution of wealth derive from contractarian theory and the concept of the veil of ignorance.[175] Suppose a group of people must agree about the starting distribution of resources in their society. Each would prefer more for himself and less for others. But of course, this principle would not provide the basis for any agreement. So we correct for this selfishness by insisting that the distribution decision be made by people acting in some *original position*, before they have lived their lives. Further, they do not know what their own individual set of endowments will be—in short, they must make the distribution decision in a setting where selfishness will not be much of a factor, because they do not know how they as individuals will come out in this distribution scheme. Any entitlement or rule for creating entitlements that they agree to would be equally likely to benefit someone else as themselves.

Distributive arguments from the veil of ignorance attempt to eliminate selfishness as a factor in decision making. Unfortunately, in the process they also seem to eliminate most of the relevance of eco-

174 *See* Hovenkamp, *Positivism*, *supra* note 20, at 849-50.

175 *See* JOHN RAWLS, A THEORY OF JUSTICE 150-58 (1971) [hereinafter RAWLS, JUSTICE].

nomics to the distribution decision. Because neoclassical economics begins with the rational maximization of individual satisfactions as a premise, it is always concerned with incentives. By eliminating selfishness in decisions about justice, the veil of ignorance eliminates incentive effects as well. Distributions made from behind the veil of ignorance are *starting* distributions and thus have no effect on people's incentives.

This qualification is extremely important, because the legal policymaker is not acting at the beginning of time. She necessarily redistributes *existing* wealth, much of which was earned, and in the process creates distributional rules (such as progressive taxes) that may affect people's incentives to produce more wealth in the future.

Nonetheless, arguments from the veil of ignorance remain important for two reasons. First, individual preferences made behind the veil of ignorance may *include* preferences relating to the maximization of incentives; to that extent, the preferences are economic. Second, contractarian theory is not concerned with incentives for their own sake, but rather with the kind of society people wish to live in. That is, to brand arguments from the veil of ignorance as irrelevant because they pay inadequate attention to incentives assumes a much more powerful role for productivity than might be appropriate. People may in fact prefer a less productive society in which wealth is distributed in a way they find more just.

At least three theories of distribution can be derived by imagining a veil of ignorance, and all three flow robustly from alternative, equally rational premises: (1) people will prefer policies that keep improving the lot of the worst off—John Rawls's *maximin*; (2) people will prefer policies that maximize total social wealth, without regard for individual distribution; and (3) people will prefer absolute equality of initial distribution.

Rawls generally presumed that people were risk averse and would not trade a chance of great wealth for the risk of abject poverty. As a result, they would favor social policies that brought the worst off to some minimal level of welfare before benefitting those who are better off.

Richard Posner criticizes the *maximin* as being unrealistically risk averse and hostile toward incentives. Rather, suggests Posner, individuals acting behind a veil of ignorance would seek to maximize the *total* size of the pie, for this would maximize their relative expected shares, although the worst off could be much worse off than they would be under the *maximin*.[176] In so doing, argues Posner, people

[176] POSNER, ECONOMIC ANALYSIS, *supra* note 1, at 461-63. *See, e.g.*, ABBA P. LERNER, ECONOMICS OF CONTROL 23-40 (1944); Mancur Olson, *Why Some Welfare-State Redistribution to the Poor is a Great Idea*, *in* DEMOCRACY AND PUBLIC CHOICE 191, 200-05 (Charles K. Rowley ed., 1987).

sitting behind the veil would take incentives into account in a way that would dominate distribution concerns.

What people choose when they are under the veil is largely a function of what we assume they know and their degree of risk aversion.[177] The most plausible assumption is that people will not know how their abilities will compare with those of others. Nor will they know whether they will be born wealthy or impoverished, or how lucky they will be. But they will know what they want—particularly if we accept the general neoclassical assumption that preferences are exogenous, or logically prior to social experience. For example, the models of both Rawls and Posner make assumptions about the risk aversion of those making the choices, and one does not know his degree of risk aversion unless he knows something about his own utility function. Further, the very fact that people behind the veil are being asked to choose implies that they are capable of asserting preferences, which presumably remain the same once they arrive in the real world.

But even assuming that Posner is correct, and those behind the veil would prefer to maximize the total value of society's resources, it by no means follows that they would ignore distribution. Each would begin with the introspective observation that dollars have declining marginal utility to him or her. How much additional information they have depends on our assumptions. People behind the veil would be unlikely to know the utility functions of others, since people in the real world do not even know them. They might know that others' utility curves for income slope downward, but it is just as likely that they would have no information at all about the utility curves of others.

In that case, each decision maker behind the veil would make the most likely assumption, namely, that he will have the utility function of the *average* individual. Under that pair of assumptions—declining marginal utility of income, which the decision maker knows from introspection, and a presumed utility curve of the average individual—expected well-being would be maximized under an *equal* starting distribution of the world's goods. The result would be both the maximization of expected utility and absolute equality of resources at the initial position.

Indeed, the same result follows from a narrower set of assumptions that do not require the decision maker behind the veil to specu-

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177 As Rawls has observed more recently:

> [T]he parties are not allowed to know the social position of those they represent, or the particular comprehensive doctrine of the person each represents. The same idea is extended to information about people's race and ethnic group, sex and gender, and their various native endowments such as strength and intelligence, all within the normal range. We express these limits on information figuratively by saying the parties are behind a veil of ignorance.

JOHN RAWLS, POLITICAL LIBERALISM 24-25 (1993) (footnote omitted).

late about the utility functions of others. Suppose I know only that I personally experience declining marginal utility of resources. I have no information about the utility functions of others (even whether their functions are declining or constant). Nor do I know whether my own utility function is "average" or idiosyncratic. Suppose the society that emerges has N members and NX dollars of initial wealth. Under an even starting distribution, each person would receive exactly X dollars. Under any alternative distribution some people would receive more than X dollars and others would receive less, although the average distribution would be X dollars. With respect to any such society, I, acting under the veil of ignorance, would assume an even chance that I would receive more than X dollars initially or that I would receive less. However, since I experience declining marginal utility of income, if my distribution exceeded X, the excess dollars would give me less utility per dollar than I would lose if my distribution was less than X by the same amount.

Assume for simplicity that if I start out with X dollars, each additional dollar gives me p utility, but each dollar taken away from me deprives me of q utility. This assumption operates within the illustration just as the assumption of declining marginal utility of income, but is simpler to manipulate. Assume further that $q > p$, and $q - p = s$.

Under all possible distributions, both equal and unequal, the average distribution is X and, since I am behind the veil of ignorance, I assume an equal chance that my endowment will exceed X by any given amount or fall short by that amount. Thus, for example, I would calculate an even chance that my endowment would be (X + \$100) or (X − \$100). However, the utility differential from X would be (+ 100p) in the first instance or (− 100q) in the second. So my expected utility over these two possibilities would be:

$$U = \frac{2X + 100p - 100q,}{2}$$

where U equals my expected utility over the two equal probabilities that my initial endowment will be (X + \$100) or (X − \$100). Since $q - p = s$, then $q = s + p$. Then, doing the algebra,

$$U = \frac{2X + 100p - 100s - 100p.}{2}$$

Finally,

$$U = X - 50s$$

where s is a positive number. However, under the equal distribution, where everyone starts with X, $U = X$.

Since NX can refer to all possible distributions of wealth in a society of any size, and $X + \$y$ can refer to any possible deviation from the average distribution, this example applies generally to all possible distributions in all possible societies in which the starting distribution is unequal. For any society having NX resources and N individuals, expected utility for any given individual will be maximized when everyone starts out with X.

In sum, one can quite plausibly presume that any person behind the veil of ignorance, knowing only that he experiences declining marginal utility of income, and with no knowledge about his future share of the world's resources, his abilities, or his life status, will maximize his expected utility by opting for an even distribution of initial wealth. Such a person need not know whether his utility function is "average," so the strictest possible conception of interpersonal noncomparability is satisfied. Indeed, he need not know anything about his own utility function except that his marginal utility of wealth decreases.

Suppose that those acting behind the veil wish to take productivity into account, either by making it more important than distribution in some fashion or by ignoring distribution altogether. Recall Posner's argument that those operating behind the veil would prefer to maximize the size of the pie rather than the welfare of the worst off member. How does one go about dividing up the world's wealth in a way that will maximize the size of the pie, given that we cannot predict how each person will use the resources he starts with?

Presumably, some people will be more productive than others—they will use a given asset more efficiently. Society would be better off if each unit of each asset were initially assigned to the person who would put it to best use. But acting behind the veil, no one knows who the most efficient users are or what the proper assignment will be. Further, everyone assumes that no matter how efficiently a person uses a particular asset, any assignment is subject to the law of diminishing returns. Under this assumption, and using the same analysis as above, one can show that expected productivity is maximized when assets are evenly distributed. The optimal regime would be for an initial even distribution of such assets followed by an efficient market in which they could be traded. They would then go to the highest bidder, who would presumably be the person who could use them most efficiently.

At the very least, a person in the original position would wish to ensure that each person in society had sufficient resources to enable himself to survive, be minimally comfortable, and acquire a sufficient education to develop his talents to their potential. That is, total wealth is likely to be maximized when every person in society has sufficient resources to be as productive as his abilities allow him to be.

Beyond that point, the proper distribution of wealth is relatively less important, but the general principle of diminishing returns suggests once again that the distribution should be equal. For example, suppose that an entrepreneur owns ten plants that are currently identical in every respect. The entrepreneur now acquires one hundred identical employees and must decide how to assign them. Under the principle of diminishing returns, each additional employee will increase the productivity of the plant to which she is assigned, but by slightly less than the previous employee. In that case, the entrepreneur would divide the employees evenly among the ten plants. The person in the original position, acting behind a veil of ignorance, could undoubtedly do the same with the world's wealth, for that would maximize expected productivity.

Although I am drawn to this third accounting of how people behind the veil of ignorance would choose, I cannot say categorically that such people would prefer absolute equality of distribution to either the *maximin* or to Posner's alternative. What the three arguments do indicate, however, is that the general class of arguments that attempt to relate the optimal distribution of wealth to some prior set of individual preferences are specious. Alternative sets of assumptions, which are equally plausible and generally unverifiable, yield radically different answers. Arrow's Theorem yields precisely the same result for distributions of wealth created by democratic voting. Each distribution that is proposed and passed by majority vote will be defeated by an alternative coalition considering a different proposal.[178]

Furthermore, the "agreement" about distribution behind the veil would probably not be unanimous, particularly if people have different levels of risk aversion or different fundamental values. For example, if Posner and Rawls were behind the veil, they would vote for different policies. But if the choice is not unanimous, it would run into problems with Arrow's Theorem; there could be an endless cycle of alternative votes on the optimal distribution policy. As a result, if society is to have any policy about the distribution of wealth, it must come from some source other than individual preference.

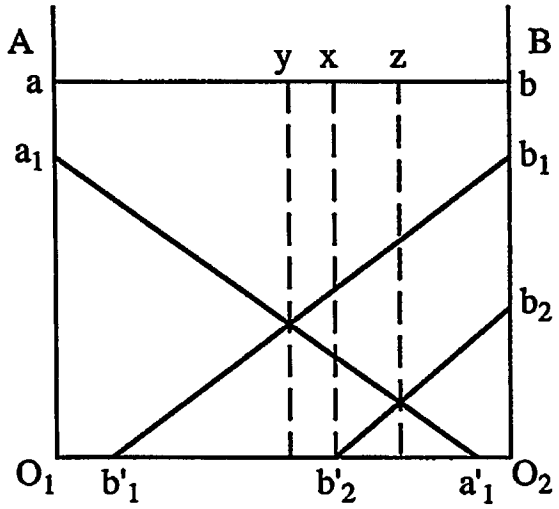
3. Redistribution Under Cost-Benefit Analysis, Welfare Liberalism, and Objective Welfare Judgments.—It is sometimes thought that a utility-maximizing sovereign will distribute resources more evenly than the market or a laissez faire sovereign. But this is not necessarily the case. Consider the following diagram,[179] which plots various utility functions for *A* and *B*. *A*'s utility for money wealth is measured from the vertical axis on the left, across the horizontal axis, and equals

[178] *See* Hovenkamp, *Rationality*, *supra* note 25, at 319-28.

[179] Adapted from AMARTYA SEN, ON ECONOMIC INEQUALITY 17 (1973).

the area beneath *A*'s utility curve. *B*'s utility is measured exactly the same way, except from right to left.

Figure 2



Line *a-b* is horizontal and represents the Kaldor-Hicks assumptions that people's marginal utility of income is constant; and that different people obtain the same marginal utility from additional income. Point *X*, which signifies the division of wealth as between *A* and *B* could be anywhere along line *a-b* and *A*'s and *B*'s total utility would be exactly the same. Point *X* dropped to the horizontal axis simply divides a rectangle (*A-B-*O_2*-*O_1) into two parts, and the sum of the two parts is the same no matter where the line of division occurs. This illustrates the traditional neoclassical assumption that total social welfare is irrelevant to distribution.

The pair of lines a_1-a'_1 and b_1-b'_1 represent the assumption that *A* and *B* have the same marginal utility functions for wealth but that each experiences declining marginal utility as wealth increases. Since total utility is maximized when marginal utilities are equated, the greatest total utility occurs when wealth is divided at point *Y*—where the division is precisely even.

But suppose *B* obtains a much lower utility from income than does *A*, and that *B*'s utility function is line b_2-b'_2. In this case, total utility is maximized when income is divided at point *Z*.

In short, the relationship between utility and distribution depends entirely on the shapes of the utility curves of those people whose income is being distributed. Both the Kaldor-Hicks assumption that all distributions create the same amount of utility and the liberal utilitarian argument for wealth equality rest on the premise that different people have identical (or at least closely similar) utility functions. For example, when Marshall, Pigou, and other members of the marginal

utility school defended wealth transfer policies on the basis of declining marginal utility, they assumed that the people subject to such transfers were of "similar temperaments."[180] Of these alternatives, liberal utilitarianism is superior. Both assumptions require interpersonal utility comparisons, but liberal utilitarianism makes the more realistic assumption that individuals have declining marginal utility of income, while Kaldor-Hicks assumes that it is constant.

The objective welfare judgment treats people as if they have similar utility functions; but it does so only over a small range of their utility curves. That is, objective welfare criteria can be used to make judgments that for most people the marginal utility of food or housing is greater, up to some point, than the marginal utility of jewelry or fast cars. Most people value such primary goods more highly, until they are supplied in some minimum sufficient quantity, than they value other goods further up the chain. Such judgments, which are common in medicine, psychology and the other social sciences, tend to treat people as evolving biological organisms that have similar, objectively measurable needs for basic life-sustaining commodities.

As consumers, people with surplus wealth may have different, individualized tastes. But as biological organisms, people's needs for survival are much more similar. When we consider what it takes to maintain an individual and turn him into a productive member of society, the optimal basket of goods (food, housing, medical care, education) may vary from one person to another. Nonetheless, we might be able to produce a more generalized basket that, while not optimal for anyone, does much good for almost everyone. The objective welfare judgment is more categorical, or more willing to generalize over large groups.

At the same time, however, the appropriate domain of such judgments is best restricted to "primary," or survival goods, and not expanded over the individual's entire utility function. The market itself reflects the uniqueness of this distinction between primary and other goods. Consider, for example, the relatively standard nature of employee benefit packages. Many are negotiated between employee groups, such as unions, and their employers; others are created by statute, such as those administered by public employers; still others are created unilaterally by employers in response to perceptions of

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180 *See* PIGOU, *supra* note 96, at 89.

> [A]ny transference of income from a relatively rich man to a relatively poor man of similar temperament, since it enables more intense wants to be satisfied at the expense of less intense wants, must increase the aggregate sum of satisfaction. The old "law of diminishing utility" thus leads securely to the proposition: Any cause which increases the absolute share of real income in the hands of the poor, provided that it does not lead to a contraction in the size of the national dividend from any point of view, will, in general, increase economic welfare.

Id.

their employees' needs. Such packages typically include monetary contributions for health care, retirement security, disability and life insurance, sick leave, and maternity leave. They most often do not include funds for purchasing art, vacation homes, recreational drugs, or compact disc players.[181]

Perhaps most importantly for the legal policymaker employing traditional economic concerns, objective welfare judgments take incentive effects into account by considering the human being as an agent of production rather than an agent of consumption. As consumers, people may have idiosyncratic and noncomparable utility curves, but as biological organisms they may have quite similar production functions, at least up to a certain point. Productivity, unlike preference, is an inherently objective category.

V. Economists and Objective Welfare Judgments

A. The "Objective" Meaning of Economic Welfare

Everyone engages daily in objective welfare judgments. By looking at people's language, their clothing, their automobiles, their demeanor, and numerous other things, we make judgments about how well off or satisfied they are. Statements such as "*A* is better off than *B*," or "*A* seems to be relatively unhappy," assert something. They generally elicit either consensus or disagreement, *not* a response such as "Statements of this kind have no meaning." These comparisons are sometimes referred to as interpersonal comparisons of utility, but in fact they are not, for they are generally not based on utility information at all.

The rhetoric of theoretical economics is that objective welfare judgments are nothing but disguised interpersonal comparisons of utility that can and should be avoided. But the critique is disingenuous, because objective welfare judgments are ubiquitous in both economics and law and economics.[182] First, as noted previously, since economists cannot observe the satisfaction of others directly, they use surrogates (such as willingness to pay) that "objectify" satisfaction in such a way as to make interpersonal comparison possible. In this

[181] For example, it would not be either irrational or unscientific for someone looking at the entire range of bargained-for employee benefit packages in the United States to conclude that people as a group place a relatively high value on medical care and income security, but relatively lower, and more diversified, values on luxuries.

[182] Further, economists' use of objective welfare measures is replete with value judgments. For example, economists sometimes consider women's increased participation in the work force as a sign that a standard of living is declining—that is, a family must work longer in order to maintain a certain standard of comfort. It could as easily be a sign of women's emancipation. *See* Frank Levy, *Incomes, Families, and Living Standards*, *in* American Living Standards (Robert E. Litan et al. eds., 1988).

sense, both theoretical and applied economics are replete with objective judgments about what constitutes "welfare."[183]

But if economic welfare is not the same as well-being, what is it, and how does it relate to well-being? First, economic welfare might be nothing more than wealth, or the aggregate of market value. We say that a society with competitive markets has more wealth, or economic welfare, than one without them. But then we must ask why wealth is worth having. Why is the discovery of social states with more wealth a more worthwhile activity than the discovery of, say, social states with more of the color green?

As a matter of policy, the concept of economic welfare as wealth is not worth studying for its own sake. It is valuable only because we are willing to presume that people with more wealth also have more well-being, or welfare broadly defined. We have not bothered to create a science dedicated to ranking social states on the basis of how much green they contain. But we do spend many resources ranking social states on the basis of their measured wealth, or aggregated market value.

If the concepts of wealth, or economic welfare, contain any policy value at all, it is because they are a kind of surrogate for well-being. Economic welfare is worth talking about because most of us believe that there is a positive (but imperfect) correlation between wealth and how well off people are. That proposition is itself unverifiable, for we have no tool that measures directly how well off people are. Clearly, the very notion that allocative efficiency, or economic welfare, is worth talking about is predicated on a purely *objective* judgment that people who have more wealth, other things being equal, also have more well-being.

The same critique applies to utilitarianism. For example, John Rawls's *Theory of Justice* requires the sovereign to allocate resources in such a way that the person least well off is cared for first. But the state identifies the person who is least well off by making some kind of judgment about what being well off is.[184] That is to say, policymaking requires someone to impute *content* to the utility of someone else. We can do this only by imputing some relationship between a certain amount of wealth, or some other external manifestation, and utility. This is a purely objective judgment.

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183 *See* I.M.D. LITTLE, A CRITIQUE OF WELFARE ECONOMICS, 67-83 (2d ed. 1956); *see also* JOHN BONNER, POLITICS, ECONOMICS AND WELFARE (1986).

184 RAWLS, JUSTICE, *supra* note 175, at 75-100; *see* Kenneth J. Arrow, *Some Ordinalist-Utilitarian Notes on Rawls's Theory of Justice*, 70 J. PHIL. 245 (1973).

B. Objective Welfare Judgments in Applied Economics

So all welfare economics, both theoretical and applied, rests implicitly on welfare judgments that must be characterized as objective. When we move from theoretical to applied economics, however, this use of objective welfare judgments becomes far more explicit. For example, the concept of poverty, or a "poverty line," implies that people whose income falls below a certain level need additional attention from the state.[185] Not only determination of the level, but the very notion that a poverty line can be generalized over a large number of individuals or families rests on the starkest possible interpersonal comparison of utilities or on an objective judgment that a family needs a certain amount of income in order to obtain a socially acceptable standard of well-being.

Similarly replete with objective welfare judgments is the ubiquitous economic notion of the "standard of living," which forms a basic yardstick for comparative determination of how well off people are under various economic circumstances. Living standards can be estimated in a variety of ways. Comparing different families in different situations generally requires one to use "equivalence scales." Suppose, for example, the question is how much income a family of four must have in order to enjoy the same living standard as a family of two. To answer such a question, one must generalize about what a typical family of two consumes and then consider whether the family of four consumes precisely twice as much (for example, about twice as much food, but probably not twice as many automobiles or exactly twice as many square feet of housing). This approach seems sensibly calculated to give the legal policymaker useful information about how well off people are under different circumstances. But the basic approach of defining a "basket" of goods consumed by the typical family of a given size rests directly on objective welfare judgments.[186]

Closely related to the concept of "standard of living" is "quality of life," which attempts to compare life quality in different locations by looking at the relative prices of goods and services. Strictly speaking, the entire enterprise makes economic sense only if the families living in those different places have the same utility curves.[187]

Perhaps the most pervasive use of interpersonal utility comparisons by policy economists is in cost-benefit analysis, which is applied

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185 On the policy problem of poverty, and problems of definition, see A.B. ATKINSON, THE ECONOMICS OF INEQUALITY 224-55 (1983).

186 *See generally* ROBERT A. POLLAK, THE THEORY OF THE COST-OF-LIVING INDEX (1989) (reprinting 12 articles discussing the cost-of-living index and its bounds under various sets of assumptions).

187 *See, e.g.*, Glenn C. Blomquist et al., *New Estimates of Quality of Life in Urban Areas*, 78 AM. ECON. REV. 89 (1988); Joseph Gyourko & Joseph Tracy, *The Structure of Local Public Finance and the Quality of Life*, 99 J. POL. ECON. 774 (1991).

today to many government programs.[188] Orthodox cost-benefit analysis proceeds by assuming that dollar losses to the victims of new programs or projects have the same welfare value per dollar as the dollar gains to the beneficiaries. Of course, the notion that any given dollar gives two different people the same amount of utility is pure speculation. Several economists have addressed this problem by advocating "weighted" forms of cost-benefit analysis that assign a multiplier to the dollar effects on people for whom the marginal utility of a dollar is presumably high, such as the poor.[189] This assessment might be quite sensible in some circumstances, but it also requires both interpersonal utility comparisons and generalization of these comparisons over very large groups.

C. *Objective Welfare Judgments in Law and Economics*

Legal policy must consider what maximizes the well-being of society's members, keeping in mind that "well-being" is not simply wealth, but is measured by other surrogates as well, such as those used in the social sciences. Early in this century, behaviorism became the dominant methodology in social science, but its influence extended far beyond.[190] Jurisprudence encountered behaviorism already in 1881 when Holmes argued in *The Common Law* that those who administer the laws should not be concerned with subjective intent as such, but only with external manifestations indicating intent.[191]

Legal doctrines that appear repeatedly in the literature of law and economics, such as the so-called "reasonable man" standard in the law of negligence, make sense only on the premise that the person applying them is indulging either in interpersonal utility comparisons or in some kind of objective judgment about welfare. Posner notes that in applying the reasonable person standard, "the courts do not attempt to measure the actual costs to the parties, taking account of their individual capacities for avoiding accidents. Rather, they esti-

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188 *E.g.*, Exec. Order No. 12,866, 58 Fed. Reg. 51,735 (1993), *reprinted in* 5 U.S.C.A. § 601 (West Supp. 1994) (requiring federal administrative agencies to use cost-benefit analysis before promulgating new regulations).

189 *E.g.*, JAMES T. CAMPEN, BENEFIT, COST, AND BEYOND 40-42 (1986); EDWARD M. GRAMLICH, BENEFIT-COST ANALYSIS OF GOVERNMENT PROGRAMS 133 (1981); Richard S. Markovits, *Duncan's Do Nots: Cost-Benefit Analysis and the Determination of Legal Entitlements*, 36 STAN. L. REV. 1169 (1984). For a skeptical view of such approaches, see ROBERT SUGDEN & ALAN WILLIAMS, PRINCIPLES OF PRACTICAL COST-BENEFIT ANALYSIS 198-207 (1978).

190 *See* Jared S. Moore, *Behavior vs. Introspective Psychology*, 30 PSYCHOL. REV. 235 (1923); Margaret F. Washburn, *Introspection as an Objective Method*, 29 PSYCHOL. REV. 89 (1922). On behaviorism in sociology, see LUTHER L. BERNARD, THE TRANSITION TO AN OBJECTIVE STANDARD OF SOCIAL CONTROL (1911); L.L. Bernard, *The Objective Viewpoint in Sociology*, 25 AM. J. SOC. 298 (1919); F. Stuart Chapin, *Measurement in Sociology*, 40 AM. J. SOC. 476 (1935). *See also* EDWARD A. PURCELL, THE CRISIS OF DEMOCRATIC THEORY 34-38 (1973).

191 O.W. HOLMES, THE COMMON LAW (1881); *see also* O.W. Holmes, *The Path of the Law*, 10 HARV. L. REV. 457, 459-60 (1897).

mate the accident-avoidance costs of the average (in legal parlance 'reasonable') person in each party's situation."[192] When the relevant actors are business firms, cost means cost, and determining the lowest cost avoider is theoretically easy. But when the relevant actors are individuals, the judge must measure utility costs, not dollar cost.

One problem of law and economics that makes objective welfare measures essential is that law often deals with nonmarket encounters between individuals, frequently with transactions that cannot be mimicked in the market, not even conceptually. As a result, those engaged in law and economics often, and correctly, use objective welfare judgments.[193] For example, when Posner discusses criminal penalties, he concludes that the optimal sanction must be sufficiently large that the criminal derives less utility from committing the act (when faced by the sanction, suitably increased to offset the uncertainty of detection) than from not committing it.

But how does one determine the amount of utility that the criminal derives from his crime? In the case of theft, Posner lets the fenced value of the stolen article act as a surrogate for the utility to the criminal. For example, if the criminal can sell the stolen jewel for $500, then the optimal fine would be something around $501, times the inverse of the probability of detection.[194] However, as soon as the crime involves a transaction where the market cannot easily be mimicked, such as forcible rape or mayhem, estimating the criminal's utility becomes impossible. Any effort to assess a suitable penalty in an individual case would require a truthful statement from the criminal that he lost more utility from a particular sanction than he gained from the crime for which the sanction was being administered. Formulating a general sentence for all defendants convicted of such a crime would require interpersonal comparisons of utility. The decision that twenty-five years is the optimal sentence for rape rests on the same kind of interpersonal utility comparison as the decision that progressive taxation will make society better off. The law and economics theory of optimal sanctions generally purloins[195] the language of price theory, which is objective, in order to speak about utility, which is not. It assumes that criminals maximize profits when in fact their utility functions are much more complex.

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192 POSNER, ECONOMIC ANALYSIS, *supra* note 1, at 167.

193 More than 60 years ago, Chicago economist Jacob Viner criticized neoclassical economists for purporting to measure only subjective individual welfare but unconsciously jumping to an objective standard as soon as they were required to evaluate the consequences of nonmarket or group transactions. "[M]uch of what passes for utility theory is really objective price-theory presented in the purloined terminology of subjective analysis. . . ." Jacob Viner, *The Utility Concept in Value Theory and Its Critics. II. The Utility Concept in Welfare Economics*, 33 J. POL. ECON. 638, 657 (1925).

194 POSNER, ECONOMIC ANALYSIS, *supra* note 1, at 221-24.

195 Viner, *supra* note 193, at 657.

Posner acknowledges this. He notes that "one cannot know with anywhere near the same confidence" whether an involuntary transfer of wealth such as a criminal penalty is efficient. His response is pure instrumentalism:

> But if we insist that a transaction be truly voluntary before it can be said to be efficient . . . we shall have very few occasions to make judgments of efficiency . . . . An alternative approach, which is in the spirit of Kaldor-Hicks . . . is to try to guess whether, if a voluntary transaction had been feasible, it would have occurred.[196]

Posner's basic observation is absolutely correct: judgments such as these are essential to legal rulemaking. We certainly cannot dispense with them simply by hypothesizing market preferences. The behavioral psychologist cannot feel another person's pleasure and pain any better than the economist can, but she is not acting unscientifically as her own discipline defines that term. The behavioral psychologist uses observable responses as a surrogate for pain in the same way that the wealth-maximizing economist uses wealth as a surrogate for welfare.

When we consider well-being objectively, the technical constraints on our ability to make interpersonal comparisons of well-being become much less important. For example, in considering whether to tax the wealthy to provide education to the poor, the legal policymaker generally does not rely on observed market behavior—that will tell her only that the poor are not attending college in large numbers. Rather, she makes judgments about the effect of education on the unemployment rate or the ability of parents to feed their children, or the impact of the tax on the taxpayer's work incentives. While she might not be able to reduce these utility considerations to an exact number, her surrogates seem much closer to the values she considers relevant to the utility calculus.

D. Human Capital: The Consumer as Producer

Law and economics has expanded the domain of economics to include the many nonmarket transactions that are an everyday subject matter of law. Most of criminal law, environmental law, tort law, and family law, to name a few areas, are heavily concerned with involuntary transfers of wealth or well-being. As a result, traditional economics, with its focused concern on the market, often falls short analytically.

One of the methodological facilitators of this expansion in the domain of economics is the idea of "human capital." Though the concept of human capital is old, it was developed rigorously by Gary

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[196] POSNER, ECONOMIC ANALYSIS, *supra* note 1, at 15.

Becker since 1964.[197] In Becker's model, each human being is a tiny firm containing a single plant with defined productive capacities. But the human plant, just as any other, cannot produce unless it has access to certain inputs. These include the things necessary to sustain life and growth, good health, and education. One way to analyze legal rules is to consider the impact of events subject to these rules on the human being as producer rather than as economic consumer.

The concept of human capital enables the policymaker to make certain judgments that he otherwise could not. For example, consider the plight of the policymaker who is attempting to justify a greater criminal penalty for cutting off someone's arm than for pinching someone's nose. The policymaker cannot perceive the pain of either directly, and given the absolute noncomparability of utilities, there is no way to compare the statements of pain made by the victims. Even willingness to pay (assuming we could measure it) would produce haphazard results. A wealthy person may in fact be willing to pay more to avoid having his nose pinched than a poor person could pay to avoid having her arm cut off.

But one way to defend the greater penalty for the first crime is by examining the effects of the two crimes on human productivity. The victim whose nose is pinched likely will not miss any work, and his productivity will not be greatly affected. The victim whose arm is cut off is a different matter. Depending on her job, she may become incapable of performing and need training for something different. In that case, the social cost of the crime is at least the cost of retraining her plus medical expenses. Even if she can continue to perform her job, there will be a temporary shut-down: her employer will be deprived of her labor during a lengthy convalescence period. Since the human body, unlike some other physical plants, tends to wear out even when it is not being used (and particularly when it is subjected to trauma), the victim's total productivity will diminish. Measured in this way, the social cost of forcibly removing someone's arm is clearly greater than the social cost of tweaking someone's nose.

The idea of human capital suggests an important solution to many problems in economic analysis of law. The plant is generally best off when it is using the least costly mixture of inputs and producing the most value of the output it was designed to produce. Plants do not have "utility" functions as such; they have *production* functions. As noted earlier, production functions can be determined objectively by the trained observer.[198] As a result, ordinalism is not a constraint on our ability to measure efficiency as applied to business firms. To the extent that human "plants" are more or less the same, their optimal

197 GARY S. BECKER, HUMAN CAPITAL (1964, 2d. ed. 1975).

198 *See supra* text accompanying notes 125.

inputs are similar. The trained outside observer can look at a plant and say something like, "This plant needs three employees, four barrels of flour, three sacks of sugar, and twenty-five pounds of butter, and it can begin producing efficiently." So the utilitarian's list of primary goods has become nothing more than the shopping list for a plant of a specific kind.

Thus, an important potential of the theory of human capital is to create a theory of distribution that fits *inside* the neoclassical model of economics. It does this by substituting an objective theory of welfare, like that applied in price theory or the economic theory of the firm, to biological organisms. As noted previously, policies favoring the forced redistribution of wealth are generally regarded as indefensible under accepted economic doctrine. Their justification must lie elsewhere, as, for example, in ethics.[199] However, the constraints that make human *utility* functions non-comparable generally do not apply to firm *production* functions, because the latter are measured entirely in terms of productive potential. The only question is how far to push the point. If we consider all human production plants to be identical, if all wealth is used mainly to make people more productive, and if the production functions are convex (that is, the law of diminishing returns applies), human productivity would be maximized when wealth is equalized. In the real world, of course, human productive potential is not absolutely identical. Nevertheless, this observation is not dispositive. Similar production plants owned by the same firm are not absolutely identical either, but a profit-maximizing firm might treat them as if they were, for this reduces the transaction costs of deciding how many resources each should receive.

Perhaps more realistically, the theory of human capital should be used to support somewhat more qualified judgments about redistribution. Very likely, only a part of individual wealth is used to increase productivity; the rest is held as a kind of surplus. In that case, the policymaker bent on maximizing human productive efficiency would try to ensure that each individual received enough of society's resources to bring his capacity up to its full potential. Beyond that point, each person should be entitled to keep his own surplus. An optimal distribution (or social welfare) policy, then, would try to ensure that each person received enough housing, health care, food, clothing, and education to make him a fully productive member of society. Social surplus beyond that point could be kept by those who earned it.

Considering people as producers rather than consumers permits us to analyze the social cost of transactions such as assault and battery

199 *See, e.g.*, POSNER, ECONOMIC ANALYSIS, *supra* note 1, at 461 (stating that justification of forced wealth transfers "must be sought in ethics rather than in economics").

without obviously engaging in interpersonal utility comparisons. The concept of human capital may also explain why parents invest (or underinvest) in children, and why we have subsidized public education: parents might underinvest in their children's human capital if the principal "value" of children to them is their household contributions. No particular prospective employer will want to pay for a child's education, because the child will probably end up working for someone else. As a result, the productive years of a person, viewed from the perspective of his childhood, has a public good quality and justifies the subsidized education.

But does the concept of human capital really enable the policymaker to avoid interpersonal utility comparisons? Or does it merely finesse the problem by imagining it away? Positive economic analysis without interpersonal utility comparisons can measure only (1) the amount that has been invested in human capital, whether individually or in some group and (2) the productive capacity of a human being, defined strictly in terms of the market value of her skills. A strictly positive science of human capital must therefore limit its measurement of the welfare effects of torts and other involuntary wealth transfers to these elements. Such an approach suggests that (1) a battery on a retired person has only minimal welfare effects—in fact, the premature death of a retired pensioner produces a social benefit, and (2) the wrongful death of a child should yield damages no greater than the investment to date in that child's maintenance and education; the child can easily be replaced (if not by its own parents, then by someone else), so all that is lost is the amount invested. The first case is like the wrongful destruction or damage of a plant that is already worn out and waiting to be dismantled. The second case is like the wrongful destruction or damage of a plant that is in the early stages of construction.

Efficient investment in human capital requires expenditure for a list of goods that is more or less the same as the utilitarian's list of "primary" goods for which utility is thought to be high, such as education and the prerequisites for good health—namely, food, shelter, clothing, and medical care. In a technical sense, we may avoid the problems of interpersonal utility comparisons by regarding the person as a firm having "inputs" rather than a consumer having desires. But there is more than a little sleight of hand here. The notion that a person obtains more utility from the food essential for survival than another obtains from jewelry is considered unscientific by the ordinalist economist. But clearly that notion was driven by the biological observation that the body needs food but not jewelry in order to survive and function. Are the observations (1) that people obtain more utility from a certain list of primary goods or (2) that these same goods make people more productive really so different from one an-

other that we can proclaim the first to be purely speculative while the second is scientific?

More importantly, the idea that we can determine objectively the optimal inputs into the human firm's production function suggests a role for state welfare policy today similar to the role of interpersonal utility comparisons in the welfare economics of the 1920s and earlier. The important conceptual difference is that, since the welfare surrogates are objective, they do not depend on utility information at all. Already in the 1920s the concept of "primary" goods and interpersonally comparable utilities was driven by the observation that, although individual aesthetic tastes might vary a great deal, people required a relatively common set of goods and services in order to be productive members of society. The marginal utility school and interpersonal utility comparisons have re-entered economics through the back door.

Gary Becker's work on family law and human behavior[200] applies the concept of human capital to many areas of activity, including the formation and dissolution of families, decision making within them, education, job selection, and lifestyle choice. One of the great difficulties in applying economic analysis broadly to such behavioral choices is identifying the boundary line between the market and the structure of individual tastes. Does a person refuse to go to college because she cannot afford it, or because she simply prefers not to? Alternatively, does someone marry a poorly-educated spouse because she cannot "do better," or is it entirely a matter of preference?

Becker's work, which has formed the foundation for much of the Chicago School economic analysis of family law,[201] addresses these problems by assuming that one can assign a set of identical preferences to all economic decision makers and then evaluate the differential rates of success that people have in satisfying these assumed preferences. Once again, the individual's selection of products or services should be treated as no different from the business firm's selection of inputs. If the firms are operating in a competitive market, the optimal selection of inputs will be more or less the same for all plants of a given structure and can be determined by a trained outside observer. So it is with individual consumer preferences. Differences in tastes are explained *within* the model by the simple assertion that, just as some firms are more efficient than others in obtaining the optimal mixture of inputs, so too some consumers are more successful than others at maximizing their preferences. As Becker explains,

> Consider a logical extension of the view that behavioral differences previously attributed to differences in taste are in fact due to differences in productive efficiency. One might argue that indeed all households have

200 *See* GARY S. BECKER, THE ECONOMIC APPROACH TO HUMAN BEHAVIOR (1976) [hereinafter BECKER, HUMAN BEHAVIOR]; GARY S. BECKER, A TREATISE ON THE FAMILY (1981).

201 *E.g.*, POSNER, ECONOMIC ANALYSIS, *supra* note 1, at 139-61, 505-15.

> precisely the *same* utility function and that all observed behavioral differences result from differences in relative prices and access to real resources. In the standard theory all consumers behave similarly in the sense that they all maximize the same thing—utility or satisfaction. It is only a further extension then to argue that they all derive that utility from the same "basic pleasures" or preference function, and differ only in their ability to produce these "pleasures." From this point of view, the Latin expression *de gustibus non est disputandum* suggests not so much that it is impossible to resolve disputes arising from differences in tastes but rather that in fact no such disputes arise.[202]

Becker then suggests that individual preferences are likely a result of evolution by natural selection. In the long run, differences in preferences yield differences in ability to survive, and the environment will select those with the best suited sets of preferences. This is of course identical with an argument that is quite common in industrial organization theory that competition acts as a form of natural selection. Only those firms that choose the most efficient mixture of inputs will survive in the competitive process.[203] Just as business firms under competition tend to become equally efficient, the evolutionary process conducts human consumers toward identical preferences. The result is considerable homogeneity among individuals: all the surviving monkeys have prehensile tails, all the surviving tree frogs are the same shade of green, all the surviving shoe manufacturers have adopted the same capital-intensive technology.

As a matter of fact, the uneducated may derive as much subjective pleasure from watching "Hee-Haw" on television as the educated obtains from reading James Joyce in the parlor. But if optimal preferences are assumed to be the same, a college education can be evaluated for its success in enabling its owner to satisfy his preferences—perhaps by giving him higher income or by making him a more efficient selector among an array of choices. The investment in education shows up in more efficient output—in this case, the preference of good literature over bad television.

Posner employs the same analogy, beginning with the observation that the family is a producing and consuming unit, and then likening the family to a firm. "The food, clothing, furniture, medicines, and other market commodities that the household purchases are really inputs into the production of nourishment, warmth, affection, children, and the other tangible and intangible goods that constitute the output of the household."[204] The result of this collapse of consumption anal-

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202 BECKER, HUMAN BEHAVIOR, *supra* note 200, at 145 (emphasis in original) (footnotes omitted).

203 For applications of the theory in the literature on the firm, see George J. Stigler, *The Economies of Scale*, 1 J.L. & ECON. 54 (1958); Leonard W. Weiss, *The Survival Technique and the Extent of Suboptimal Capacity*, 72 J. POL. ECON. 246 (1964).

204 POSNER, ECONOMIC ANALYSIS, *supra* note 1, at 139.

ysis into production analysis, of course, fully solves the problem of differential consumer preferences. One can evaluate the selection of inputs by looking at the quantity or quality of the output.

All this may provide a powerful explanatory model for human behavior, but it should also be clear that in the process Becker and Posner have substituted a set of objective welfare judgments for revealed preference. In fact, once one treats collections of people as having identical tastes, then Pigou's broad arguments for wealth redistribution to maximize total social well-being must be admitted as well.[205] The money held by the wealthy in excess of their optimum productivity needs should be transferred to the poor who need it to reach optimum productivity. An owner of multiple plants would do exactly the same. For example, if two plants each required five boilers for optimal performance but one plant currently had six while the other had four, the owner would transfer one boiler and both plants would perform more efficiently.

By turning consumption into production for purposes of analysis, we may be able to make more sophisticated judgments about choice. But in the process we have both objectified and cardinalized our notions about consumption. We can then justify transferring wealth from one person to another in order to pay for the latter's housing, education, or health, simply by postulating that these things contribute more to the human capital of the transferee than do a Matisse, a third car, or expensive jewelry to the wealthier transferor. We should be able to rank those things that contribute a great deal to human capital (education, housing, medical care, food) and those things that contribute little (cigarettes, liquor, jewelry, art, dirt bikes) and tax the latter in order to provide more of the former. Welfare, measured by human productivity, would increase.

In the process, we will have exhumed the Progressive Era's policy agenda. Progressive economists such as E.R.A. Seligman justified the progressive income tax by dividing human desires into "necessities, comforts, and luxuries."[206] When they suggested a policy of depriving one person of $100 in luxuries in order to give another $100 in necessities, they were simply recognizing that the sovereign places a priority on those goods that are necessary to sustain a person's life and health and make her into a productive member of society. The modern economics of human capital yields much the same result.

VI. Conclusion

Individual preference is the core of our political and economic theory. American political and economic institutions are dedicated to

205 *See* Pigou, *supra* note 96, at 89.

206 *See* Hovenkamp, *First Great Law & Economics Movement*, *supra* note 26, at 1002-09.

the principle that policy and resource allocation should be determined by the free choices of participants. A state policy that never takes preference into account cannot purport to be democratic and cannot have even the simplest of markets.

But our reliance on preference is not unambiguous, nor can it be exhaustive. Indeed, every tool that we have created for measuring and aggregating preference has produced only the crudest and most approximate results. Further, although democracy and the market both purport to measure preference, they use inconsistent measuring rods. The democratic concept of one person/one vote weighs all preferences equally. Markets weigh preferences by willingness to pay. The legal policymaker who wants a coherent policy must solve the resulting antinomies. Failure to recognize this is a pervasive weakness in both cost-benefit analysis and public choice theory. Cost-benefit analysis ignores democratic assertions of preference altogether. Public choice theory tends to solve the conflicts by applying the economic measure of preference to political markets. For that reason, much of public choice theory too easily concludes that society will be improved as policy decisions are made increasingly in private markets and decreasingly through democratic political markets. But this is not a resolution of the antinomies; it is an abdication. The only proper solution to the problems inherent in the measuring and aggregating of individual preference is for the legal policymaker to escape from exclusive reliance on preference-based determinants of policy. This requires that legal policy be driven less by law and economics or public choice, and more by objective welfare judgments.